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## ABSTRACT

This packet describes the Building Bridges Program at Illinois State University, which integrates the secondary preservice teacher education curriculum across English, history/social science, technology and business education. The goal of the program is to prepare preservice secondary teachers with experiences that promote their understanding of how to initiate, develop and deliver integrated instruction to teachers from divergent disciplines. The program allows secondary education students the opportunity to examine closely the tenets of curriculum integration and then learn through practice. Since 1992, 450 future teachers have been exposed to integrated curriculum development through this program. The packet contains a description of the program and a schedule of student presentations of integrated units from October 9, 1996 and October 12, 1995. Each session presentation includes a unit description with curricular links, rationale, and objectives for the unit. (EH)

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The Building Bridges Program: Connecting Secondary Teacher  
Preparation Programs to Foster Integrated Learning.

by Michael K. Daugherty  
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# **The Building Bridges Program: Connecting Secondary Teacher Preparation Programs To Foster Integrated Learning**

*Theme: Current Issues in Teacher Education*

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*About the Authors:* The authors of this manuscript all serve as lead professors within their respective teacher education programs on the Illinois State University campus. The four authors have led the funded Building Bridges Program since the inception of the program in 1992. Dr. Daugherty, a nationally recognized author and speaker in technology education, is director of the Technology Education Program at Illinois State University. Dr. Foehr, a nationally recognized author of essays in English education, is the director of the English Education Program at Illinois State University. Dr. Haynes, a professor of business education, directs the Business Teacher Education Program and the Connections Project, and Education to Careers grant project for the Illinois State Board of Education. Dr. McBride, winner of local, state and national awards for curriculum development, directs the Illinois State University History/Social Science Education Program.

## **An Abstract of the Building Bridges Program**

The Building Bridges Program, designed by four teacher educators, integrates the secondary, pre-service teacher education curriculum across at least four disciplinary areas: English, history/social science, technology and business education. The program was initiated in 1992 as an effort to simultaneously enhance four secondary teacher education programs while exposing pre-service teachers to the advantages of interdisciplinary curricula. The goal of the ongoing program is to prepare pre-service secondary teachers with experiences which promote their understanding of how to initiate, develop, and deliver integrated instruction with teachers from divergent disciplines. The program allows secondary education students the opportunity to examine closely the tenets of curriculum integration and then learn through practice, that is, by creating and delivering an interdisciplinary integrated unit of instruction with other pre-service teachers. Over the past four years, four hundred and fifty future teachers have been exposed to integrated curriculum development through the Building Bridges Project and this number continues to expand each year.

**The Building Bridges Program:**  
**Connecting Secondary Teacher Preparation Programs**  
**To Foster Integrated Learning**

Recent studies of American youths' understanding of and ability to connect the content learned in various school disciplines have revealed a generation of students who, at best, are capable of reporting memorized facts and executing routine patterns. When asked either to solve significant problems by integrating concepts within a discipline or to reflect on the connections between disciplines, American secondary students often fall short of expectations (Grubb & Kraskouskas, 1993). This report and others have spawned a number of recommendations for changes in the way students are taught and the way teachers are prepared to deliver curriculum content (National Council for Teachers of Mathematics, 1989), American Association for the Advancement of Science (1995); and, Technology For All Americans (1995).

*The solution which I am urging is to eradicate the fatal disconnection of subjects which kills the vitality of our modern curriculum. There is only one subject matter for education, and that is Life and all its manifestations. Alfred North Whitehead (1929, pp. 10-11)*

Researchers and teachers alike now question the utility of the predominantly isolated nature of the single disciplinary learning that occurs in the nation's schools. Finch (1992) suggests that teachers need guided instruction so that they can shift from an independent and autonomous manner of teaching to becoming participating members in the total school experience. To cite one example, within kindergarten through university level English/language arts programs across the nation, writing

across the curriculum programs have gained recognition and acceptance for their pedagogical soundness. They promote communication, writing, and critical thinking skills through curriculum integration, collaboration, and using language to learn (Bruner, 1966), Britton (1970), Maimon (1983), Thaiss (1986), Fulwiler (1986) (1990). Over the years, these programs, typically delivered by English teachers and professors, have come to include specialists from other disciplines as equal participants. Participation from educators representing all disciplinary areas, however, would further strengthen such programs (Blair, 1988), and Petrosky (1992). Moreover, students cultivate thinking when they experience thinking in a wide variety of contexts, construct meaning through transactional responses, and develop knowledge through meaningful, complex and long-term tasks (Marzano, 1991). This type of thinking has reciprocal benefits for other disciplines.

If current and future teachers are to be prepared to meet the challenges facing both their disciplines and schools, several changes are necessary in the structure of the curriculum and in institutional methodology. These changes include:

- Restructuring curricular requirements so that all students and teachers have the ability to make connections between content in various disciplinary fields;
- Shifting pedagogical approaches from "teaching as telling" to "learning by doing"; and,
- Strengthening the knowledge of basic issues in curriculum development, teacher education, and policy initiatives related to all educational disciplines.

While these ideas which are based on recent research and national reports, have broadened educators' perspectives about each of these issues, they have also heightened awareness of the interrelated nature of teaching strategies that encourage students to use knowledge to solve problems, reason, and communicate. Recent

literature has also emphasized the connections that teachers can make when learning activities involve students from many disciplines. What is needed, as the following reports suggest, is an integrated approach in which the domains of knowledge from various disciplines are woven together along with the related pedagogical approaches.

### **The Research Base: Developing Integrated Relationships**

The support for integrated learning, in its broadest applications, has been visible in our society for nearly a century. At the turn of the century, the University of Chicago Laboratory School faculty developed a curriculum model that was intended to unify instruction in mathematics and science. This curriculum movement, however, was resisted by physics teachers who contended that mathematics would quickly dominate their subject (Sigurdson, 1962). There have been many subsequent efforts to develop an integrated relationship between two or more disciplines. A review of recent literature (Copenhaver, 1994), Roth (1994), Ast (1995), Nagurka (1995), Ray-Overstreet and DeVane (1995), Slavin (1995), Wiburg (1995) reveals many rationales for integrating disciplinary curriculum and instruction. Table 1 outlines supportive constructs of integrated curriculum and instruction.

**Table 1**  
*Supportive Constructs of Integrated Curriculum*

- 
- |    |  |
|----|--|
| 1. | Learning is more relevant when lessons are clearly aligned with life contexts that illustrate purposes for gaining knowledge and skills (Nagurka, 1995); |
| 2. | Learning is more easily focused on students' learning styles (Wiburg, 1995);   |
| 3. | Learning is more application based, leading to higher student motivation, improved retention and learning transfer (Ray-Overstreet and DeVane, 1995);    |
| 4. | Learning is more likely to focus on problem solving, critical thinking and authentic assessment (Copenhaver, 1994);                                      |

**Table 1 (Continued)**

- 
- |    |   |
|----|---|
| 5. | Learning is more likely to raise expectations for student performance and will promote collaboration between students, between teachers, and between students and teachers (Ast, 1995); |
| 6. | The curriculum is more likely to become more clearly connected, understood and supported by faculty, students, parents, and administration (Roth, 1994), and                            |
| 7. | Instructional methods are likely to be enhanced because of collaboration (Slevin, 1995).  |
- 

### **A Pre-service Program**

With these research findings in mind, four secondary teacher education faculty at Illinois State University considered the necessary interdisciplinary preparation and experiences needed by pre-service teachers. The Illinois State University teacher education faculty members involved in this project (English education, business education, technology education, history/social science education) came to the conclusion that if graduating teachers are going to be future proponents and initiators of integrated curriculum and instruction, they will need some exposure to, and instruction in the use of interdisciplinary teaching strategies. This conclusion was supported by Maddux (1993) who suggested that if integration in the secondary schools were to be successful, the study and application of interdisciplinary teaching strategies would need to become a major component of pre-service teacher education. Similarly, in research conducted by Cook (1994), the researcher found that the degree to which secondary teachers implement integrated learning strategies depends largely upon their teaching background and their teacher training.



## **The Building Bridges Program**

How can teacher education programs promote this kind of experiential awareness and understanding among future teachers across many disciplines? At Illinois State University the Building Bridges Program revealed the answer to this question. The Building Bridges Program, designed by four secondary teacher education faculty members, integrates the curriculum across at least four disciplinary areas: English, history/social science, technology and business education. Each of the contributing faculty members became heavily involved in this new endeavor, not knowing what the outcomes would be. There were obvious concerns regarding time commitments, resources, and content issues. The faculty members, however, left their "baggage at the door" each time they met. Over the past four years, over 400 pre-service teachers have been exposed to integrated curriculum development through the Building Bridges Project and this number continues to expand each year.

The goal of the Building Bridges Program is to prepare pre-service secondary teachers with experiences which will promote their understanding of how to integrate the curriculum with other future teachers from divergent disciplines. It was determined that if these future teachers were going to be future proponents and initiators of integrated curriculum and instruction, experience would be the key. The Building Bridges Program allows secondary education students the opportunity to examine closely the tenets of curriculum integration and then learn through practice, that is, by building an interdisciplinary integrated unit of instruction with peers.

## **Program Components**

The program has four components: 1) the Building Bridges Institute - where students and faculty learn about the concepts and practices of integrated curriculum and instruction from local experts and practicing teachers; 2) interdisciplinary teaming - where interdisciplinary student teams complete team building exercises and are then assigned a project to build an integrated unit abstract; 3) the Building Bridges Symposium - where students submit their interdisciplinary unit abstracts for review and concurrently prepare and deliver a presentation in a professional conference setting to peers and faculty members (awards are presented to students who provide the best abstracts and presentations), and; 4) Building Bridges Practicum - where students participate as members of an integrated team in a public school setting. Over 150 secondary education students participated in this program in 1995. The top three integrated curriculum abstracts and presentations selected during the 1995 Building Bridges Symposium are summarized on the following pages.

## **Winning Interdisciplinary Unit Abstracts**

### Habitat for Humanity

The first project, entitled "Merging School and Community in a Habitat for Humanity Integrated Curriculum Project," presents university students with an opportunity to develop an integrated curriculum while addressing a social dilemma. Academic involvement in the Habitat for Humanity program incorporates almost all areas of the school curriculum. Students participating in the project will have the

opportunity to learn while doing something socially important. As an added bonus, participating students have the opportunity to learn practical skills that can only improve their educational experience. Through the implementation of this project, secondary students will have an opportunity to gain an understanding of the plight of homeless people. Through participation in this unit of instruction, secondary students will be equipped with the knowledge and skills to help change the homeless situation by completing a "Habitat for Humanity" project. Participating secondary students will be able to develop a proposal and present their ideas to an actual or hypothetical philanthropic organization to gain support for their project.

The Habitat for Humanity project was designed to consist of interdisciplinary student teams (10-15 students each) made up of students from each disciplinary area. These teams will be assigned the task of producing a home design that will help alleviate the homelessness problem in their community. The home designs will include such factors as design, budget, practicality, and a proposal to city government. The curriculum calls for teams to meet once a week to gauge the progress of individual components of the project. At the end of the semester, students will present the plan during an all school program. The best proposal will be allowed to present their proposed house to a philanthropic organization.

Throughout the semester project, all curricular areas within the school will weave the topic of homelessness throughout their respective curricular offerings. Students in social science courses will be examining homelessness and its effect on the community, studying strategies used to combat homelessness over the centuries, and examining the bureaucracy of combatting homelessness. Meanwhile, students in

technology education will be creating a design for an affordable home, developing a scale model of a home, and studying building regulations related to developing a home for the homeless. Science classes will contribute to the course of study by developing strategies for reusing and recycling building materials, and conducting a land evaluation of potential building sites. Mathematics and business classes will develop proposals for minimizing building costs while maximizing housing space, conduct experiments to determine the appropriate geometric shape of the home, and develop a building budget. Students enrolled in English, family and consumer science and theater will write persuasive proposals for the project, create affordable interior home designs, and develop presentations for philanthropic organizations. Table 2 outlines additional activities that might be included in this semester long project.

**Table 2**  
*Additional Habitat for Humanity Activities*

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1.	Conduct research on the homeless within the city to determine the need for housing.
2.	Locate the best demographic area within the city for the home.
3.	Write persuasive proposals designed to obtain land donations and permission to build.
4.	Write persuasive letters to local businesses and influential community members.
5.	Prepare and present the proposal to philanthropic organizations.
6.	Test the building materials for durability.
7.	Develop a fund-raising activity to raise money for a local Habitat for Humanity building.
8.	Participate in an actual Habitat for Humanity building project.

---

*\*The "Merging School and Community in a Habitat for Humanity Project" was developed and presented by the following pre-service teachers: Lee Markines from technology education; Denise Terando from business education; Leigh Cloud from theater education; Dawn Kuckuk from mathematics education; and, Michelle Sackett, Dawn Davenport, Stephanie Jarchow, and Christine Hedge of English education.*

## Where the Wind Blew Free

The second award winning project, "Where The Wind Blew Free," was designed to present secondary students with an integrated unit of study on the prairie environment's influence on humanity and culture. This integrated curriculum included writing across the curriculum, an examination of the diversity and connections in our world, and the ways that the environment influences a society's cultural, political and economic institutions. Through this integrated curriculum project, students were given the opportunity to draw connections between the disciplines of biology, history and English.

Project designers determined that participating students in Biology classes would have the chance to use the scientific method to analyze the diversity of the prairie environment, synthesize knowledge of diversity through the development of a prairie garden, evaluate the merits of prairie preserves through classroom debate, and investigate the biological characteristics of the prairie environment through hands-on examination. Meanwhile, students in English classes would analyze prairie texts (both settler and Native American) to compare cultural attitudes toward wildlife and the environment, create poetry and folktales that demonstrate a philosophical understanding of prairie life, and write thematic analyses of their own folktales and then evaluate them on the basis of preset criteria. History students participating in the project would support the project by analyzing journals written by prairie settlers, collect and examine evidence concerning the impact the environment had on settlers and Native Americans, create historical journals exploring problems and solutions related to prairie life, select historical items to place in a time capsule, and visit a prairie

restoration project and a prairie preserve. Table 3 outlines additional activities that may be included in this semester long activity.

**Table 3**

*Additional "Where the Wind Blew Free" Curriculum Activities*

- 
- |    |  |
|----|--|
| 1. | Develop drawings and poetry based on Native American poems and drawings.               |
| 2. | Examine artifacts and photographs from the period to closely examine prairie life.     |
| 3. | Conduct student scenarios and problem solving activities based on settler experiences. |
| 4. | Create folktales based on knowledge gained from the course of study.                   |
| 5. | Develop a journal containing all written and creative work.                            |
| 6. | Conduct a prairie restoration project proposal.  |
- 

*\*The "Where the Wind Blew Free Curriculum Project" was developed and presented by the following pre-service teachers: Tammy Knippenberg from biology; Sharon Thomson and Beth Hogan of English education; and Sarah Drake and Steve Williams from history education.*

### The Black Blizzard

The third place project, entitled, "The Black Blizzard: An Integrated Study of the Dust Bowl," was designed to present secondary students with an examination of the Dust Bowl and its effects on their lives. By examining the Dust Bowl era in a multi-disciplinary, integrative fashion, students would be able to see how technology can sometimes cause environmental disasters. Students would gain a basic understanding of technical and natural resources and how they affected the lives of Americans. More specifically, this curriculum experience would give students an opportunity to examine the Dust Bowl's effect on the environment and the hardships people encountered during the period. Students will be provided an opportunity to recognize the causes and effects of this environmental disaster so that they could appreciate and prevent similar problems from recurring.

This four-week curriculum activity is designed as a multi-disciplinary curricular experience where students would study different aspects of a similar topic in a number of subject areas simultaneously. During the unit of instruction, the students would examine the Dust Bowl's effect on the environment in biology classes and learn about the contributions of women during the time of the Dust Bowl as portrayed in book "*The Grapes of Wrath*" in English classes. Additionally, students in history classes would examine the historical aspects of the Dust Bowl and students in technology education classes would examine the technology that was developed and implemented during the Dust Bowl period.

In addition to examining the historical aspects of the Dust Bowl era, history students would look at the changes that have taken place in the agricultural methods used in farming industry. Technology education students would conduct research on an individual piece of machinery, new technology, or structure that impacted the people living in the era and relate the effects that technology had on future technology. Technology education students would also complete a lesson that requires them to reconstruct or develop a model of a piece of technology developed during the period and make a presentation on Dust Bowl era discoveries and how they have impacted our lives today. Meanwhile, biology students would examine the forces of wind and the effects of soil erosion and relate these concepts to the well-being of the environment. Meanwhile, English students will read John Steinbeck's book, "*The Grapes of Wrath*," and respond to the narrative within the text by comparing the role of women in the text to the role of women today. Table 4 outlines additional concepts that may be studied in one or more of the disciplinary areas.

**Table 4**

*Additional Concepts Included in the Black Blizzard Curriculum*

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- |    |  |
|----|--|
| 1. | Identify soil characteristics necessary for creating a Dust Bowl effect.                       |
| 2. | Examine the effects of soil erosion and discuss preventative measures.                         |
| 3. | Interpret the great literature from the period.  |
| 4. | Discuss the perseverance of the people who lived in Dust Bowl regions.                         |
| 5. | Analyze the measures taken to overcome environmental effects of the period.                    |
| 6. | Examine the technology developed and implemented during the period.                            |
| 7. | Examine slides, maps, interviews, and narratives from the period.                              |
| 8. | Analyze the relationships between social, political and environmental factors from the period. |
- 

In addition to the multi-disciplinary curricular activities, this project will include one activity that is conducted to integrate all four subject and pull them together. During the first week of the unit, students in all classes will be required to keep a journal in which they will record all of their personal habits during the time period. This journal will include the amount of food eaten, documentation on personal travel, and so forth. During the second week of class, students will use the scientific method to formulate a dietary and activity plan reflecting one similar to the period of the Dust Bowl. This dietary/activity plan will include the rationing of food, limited drinking fluids, limited electricity usage, etc. During the third week of the unit, student volunteers will be solicited to live under a dietary/activity plan similar to one that might have been necessary during the Dust Bowl era. After completing the project students will have one combined class period in which to reflect on their experiment and report findings.

*\*The Black Blizzard Curriculum Project was developed and presented by the following pre-service teachers: Lorie Adams from biology education, Julie Jamison of history education; Nicole Ullrich from technology education; and Christine Hari, Greg Pedersen, and Bryan Plinske from English education.*



## **Building Bridges Practicum**

During the 1995 Building Bridges Program, a forth component was added that was designed to provide pre-service teachers with the opportunity to become active, participants within secondary integration programs. Students completing the practicum portion of the Building Bridges Program spend between one and two weeks as faculty teaching-volunteers in selected secondary schools within Illinois. These secondary sites all have active, ongoing interdisciplinary programs. Through their participation in these practicum programs, pre-service teachers have the opportunity to participate in curriculum development and delivery as well as a host of other school-related issues. The Building Bridges practicum program provides the pre-service teachers with numerous opportunities as well as "real" programmatic constraints and limitations that are not easily replicated in the university setting. Three interdisciplinary pilot teams completed the practicum program during 1995. During this practicum experience, the teams worked with clinical sites to put into practice their previously developed integrated units of instruction.

## **Future Directions**

Over 400 pre-service teachers have participated in the Building Bridges Program since 1992, when it was established. Most of these individuals are now practicing teachers in Illinois and surrounding States. Although the project was originally designed to impact students in English, history/social science, business and technology education, during the past two years, several more disciplines have become active

members of the Building Bridges Program. It is the intent of the authors to continue work on this project until all curricular areas are represented in this most important project. This expansion will provide the interdisciplinary teams with a more diverse makeup that will more accurately reflect the secondary curriculum.

The four teacher education faculty involved in this project have begun to develop a mechanism for collecting data on past Building Bridges participants. This research will include the collection of data through written surveys, participation in focus groups and the completion of personal interviews.

A comprehensive study of the impact provided by these opportunities has not yet been completed. However, if the research literature is correct, and exposure to interdisciplinary learning theory and strategies at the pre-service level is the deciding factor upon which secondary programs are developed, then Illinois and surrounding States should soon have a number of flourishing interdisciplinary programs in place.

This program, although limited in depth and breadth, allows pre-service teachers the opportunity to build the constructs and dispositions toward integrated curriculum and instruction that will provide the basis for future integrated projects and staff development. This model program not only develops linkages between disciplines, but helps build bridges for students to cross into the world of professional service.

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# *Building Bridges Symposium*

## *Linking the Disciplines During Pre-Service Teacher Education*



*Ewing Manor, Corner of Towanda and Emerson*

*October 9, 1996 - 4:30 p.m. - 7:45 p.m.*

*Parking is available in the church parking lot across the street*

*Presentation of integrated units of instruction by interdisciplinary  
teams of pre-service teacher education students showcasing student  
developed curriculum integration ideas*

*Dr. Mike Daugherty, Industrial Technology*

*Dr. Regina Foehr, English*

*Dr. Lawrence Mc Bride, History*

*Dr. Thomas Haynes, Business Education*

*Dr. Claire Lamonica, University High School*

# Agenda

## ***Session I Presentations***

***4:30 - 5:45 p.m.***

### ***Upstairs Presentations:***

**"Vietnam Revisited: Twenty-one Years and Many Questions Later"** - Alicia Burke, Jym Froelich, Rebecca Lynde, Sara Tripp, Sarah Young

**"The European Experience"** - Wendy Blanton, Tina Jones, Leonore Ulaszek, Charles Watkins

**"Polls, Production, and Politics"** - Christopher Bellizzi, Chip Finck, David Green, Jennifer Knuth, Amy Quattrone

**"Starting an NFL Expansion Franchise"** - Brian Bergstrom, Jennifer Bloyd, Aaron Eddy, Greg Leban, Eric Kuffel

### ***Downstairs Presentations:***

**"An Integrated Study of the Impact of Logging on the Spotted Owl's Struggle to Survive"** - Steve Klockenga, Jay Wachtel, Bill Gipperich, Elise Aumann

**"The Phoenix Project"** - Jessie Barnett, Dylan Barth, Jim Darnell, Beth Knottnerus, Mark Molinari, Jeff Pawkak, Brian Schwarzentraub, Margaret Zumstein

**"Decision to Integrate '96"** - Elizabeth Eddy, Troy Howe, Angelique Morgason

**"Up, Up and Away With Rockets"** - Greg Moehrlin, Chad Vance, Megan Wills, Kevin Koeppen, Kim Marturiano, Mark Warunek

## ***Dinner***

***5:45 - 6:30 p.m. Buffet in Upstairs Dining Room***

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***5:45 - 6:30 p.m. Buffet in Upstairs Dining Room***

## *Agenda Continued*

### ***Session II Presentations***

***6:30 - 7:30 p.m.***

#### ***Upstairs Presentations:***

**"Exxon Valdez"** - John Goodrum, Adrian Hale, Sundown Hardt, Jenny Schmeichel, Stephanie Stinebaker

**"One of the Seven Wonders of the World: An Integrated Study of Pyramids"** - Rhonda Augustiniak, Robert Fitzgerald, Jami Kehl, Sara Marx, Nancy Molitor

**"Integrated Home Building Project"** - Tiara Bedenko, Dan Rohman, Matthew Swedko

#### ***Downstairs Presentations:***

**"The Integrated Curriculum of Company B"** - Renee Bilyeu, Jeff Lydecker, Brian Brooks, Tracy Blakemore, Stacey Shrewsbury

**"Decision '96: the Integrated Political Party Unit"** - Jeff Kintz, Jodie Schlipf, Marta Mason, Ryan Short

**"Intercreative Design"** - Kelly Podzimek, Dawn Vavrik, Rachael Rone, Michael Cichu, Ismael Zamora, Jeff Mueller, Barry Gilstrap, Kristen Algrim

### ***Closing Awards Sessions***

***7:30 - 7:45 p.m.     Downstairs***



## Vietnam Revisited: Twenty-one Years and Many Questions Later

### Group Members and Subject Areas

Alicia Burke, *Business*  
Jym Froelich, *History*  
Rebecca Lynde, *English*  
Sara Tripp, *History*  
Sarah Young, *Foreign Language*

### Subjects Integrated

**Business:** A viewpoint of how foreign investments and economic developments occurred in Asia and continue to effect the world today, in relation to the Vietnam War.

**History:** A view of how historical, diplomatic, military, and political incidents transpired through the war in Vietnam.

**English:** A representation of the literature and emotional involvement which evolved as a result of the Vietnam War.

**Foreign Language:** An exploration of the linguistic and cultural influences brought on by the French, in relation to our understanding of the war in Vietnam.

**Rationale** Why do we need to teach our students about the Vietnam War? Many educators of that era were involved either directly or indirectly with the implications of the war that ended only twenty-one years ago. Most teachers today would rather not drudge up the past, considering the number of people who are still dealing with the mental wounds that have been inflicted upon them. As a consequence, the study of the Vietnam War has not been given ample time in the classroom. Despite our reasons for resistance, students need to be educated in relation to this period of contemporary history. Teaching students about the Vietnam War can help them understand the present and make informed choices in the future. Integrating a curriculum from various disciplines of Business, History, English, and Foreign Language will ensure that all sides of this most important time period are taught to our students.

**Objectives** *At the end of the subject-integrated unit, the students will be able to...*

#### Business

...explain the major implications involved during the Vietnam War and describe how they effect the present economy. In addition, students will be able to recognize and explain why the United States needs Vietnam today. They will also focus on why the U.S. war effort helped Asian growth. Furthermore, students will be able to describe how foreign investors are effected by the Vietnamese government. As a result of this integrated unit effort, the students will be able to make valuable economic decisions in the future.

#### History

...explain the reasons why the United States became involved in the conflict in Vietnam. They will also gain historic empathy for the soldiers, their families, politicians, military leaders, domestic coalition organizers, and others who experienced the war by analyzing primary source documents and observing dramatic reenactments of combat situations in Vietnam. They will be

able to identify and label countries, cities, and waterways on various maps, explaining the features' significance. The students will be able to recognize key persons and events, describing how they shaped or determined the direction of the conflict. The students will make value judgments on the U.S. leaders' decisions to engage in the conflict in Vietnam and the Presidents' strategic resolutions to assert and escalate America's involvement. They will evaluate key events and decisions on both sides of the conflict, defending and supporting their beliefs.

### **English**

...write a five to seven page paper in which they choose a topic that has been explored throughout the unit. The given format of the paper will be an open option for the students. For example, written work can be completed via reader response, in a persuasive or informative format, or in another appropriate format approved by the teacher. The topics include implications of the Vietnam War revealed in *The Heart of Darkness*, poetry relating to the Vietnam War, and issues explored in *Platoon*, *Miss Saigon*, and *Forrest Gump*. Details such as how the war was portrayed in the particular piece, whether or not the work gave an accurate depiction of the war, and thoughts on how the war has changed morals and values of today's society should be included in the students' papers. By completing their papers, the students will have an informed knowledge base in relation to the characteristics and implications of the Vietnam War. The students will be able to critically analyze texts, develop research skills, and formulate writing techniques.

### **Foreign Language**

...discuss the circumstances and events that led up to the French colonization of Vietnam, citing various factors and their significance. The students will also be able to describe some of the French-Vietnamese customs, as well as demonstrate an understanding of the French language's influence on Vietnam's society by using songs and pieces of literature pertaining to French-colonized Vietnam. From a linguistic perspective, the students will examine the words and concepts of both languages by comparing and contrasting them to their knowledge of the English language. This will serve as just one way of increase their understanding of how language works. From a political perspective, the students will be able to recognize and describe the dimension of power the French had over the country of Vietnam and the clashing styles of national and local governing the French and traditional Vietnamese exhibited. From a geographical perspective, the students will utilize maps to locate and identify the sites and regions where the French exploited and cultivated indigenous resources.

### **Unit Descriptions**

#### **Business**

Thailand became America's principal ally in mainland Southeast Asia, serving as a key staging post for U.S. troops and military hardware going into Vietnam. Thailand and the Philippines believed the U.S. war in Vietnam would buy them time to fight their domestic communist insurgencies. In the end it was economic development which defeated the communists in Thailand, Indonesia, and the Philippines. That economic development was spurred by the conflict. The U.S. war effort poured cash into local businesses and drove up commodity prices, fueling Asian growth. Today progress in Vietnam is uneven. Televisions made in Hanoi are sold in

Denmark with a "Made in Korea" label. "Who would buy them if the box said 'Made in Vietnam?'" asks Hoang Viet Dung. "We'll change it when we establish a name for ourselves." Many Vietnamese entrepreneurs wish there were more American companies to sign deals with. Americans are also trying to take advantage of the lifting of the trade embargo against Vietnam. For American corporations the next few years in Vietnam may bring a bonanza. For the Vietnamese, their share in this bonanza is not at all certain.

### **History**

The students will develop an in depth understanding of the historical, diplomatic, military, and political events that transpired well before U.S. Marines landed near Danang in March of 1965. In addition, we will offer an overview of major domestic developments and various causes and effects of escalated U.S. troop commitments throughout the late 1960s. This unit will allow the students to achieve a deeper understanding for and build a historical framework of the events that led up to the United States' involvement in Vietnam. People, incidents, and decisions will be examined to determine who and what was responsible for the course of America's active engagement in Vietnam, and what could have been averted to prevent this era of American history from becoming the scarred legacy we face today.

### **English**

Students will discuss major themes in relation to literature that reflect on myths, beliefs, morals, and emotions, regarding the Vietnam War. In a five to seven page paper, these ideologies will be personally explored in further detail. In addition to the lesson, the students will be given a chance to invite guest speakers (relatives who were directly involved in the war), to discuss with students the realities of the war. Throughout the unit, the students will gather their work, such as their five to seven page paper, notes, poetry, handouts, daily journals, maps, and programs. All of these items will be submitted as a scrapbook which will be evaluated for their final grade.

### **Foreign Language**

The students will explore the reasons why France first colonized this geographical area, as well as their political, cultural, and social influences on the Vietnamese. As students with little to no previous exposure to French are introduced to the language, we will demonstrate its linguistic effect not only on the Southeast Asian region, but also in the education of the young Vietnamese. The students will learn about the contrasting daily lives of the French upper class and the Vietnamese peasants, in part, by examining the French plantations that used the Vietnamese for hard labor.

### **Activities and Evaluation**

The integrated and ambitious activities planned for the unit will challenge the students with many hands-on, creative, and thought provoking projects. Students will conduct research via the Internet for Business and French role playing activities, an English paper, finding political party and campaign platform activity data for History, and for finding materials (and veterans on-line) to support a Business paper requiring several sources. The students will set up and run a "Good Morning Vietnam" radio station, read primary source and magazine articles, and observe Hollywood's take on the war by watching and responding to several popular films on the subject.

Students will be evaluated on participation in the individual content areas and on written assignments. This work will constitute fifty percent of their final unit grade. Thirty percent of the students' grade will be determined through the assessment of a unit portfolio, judged by assessing the quality and completion of the organized work submitted. The final day of the unit will be dedicated to student presentations of projects created by groups of three or four students. There are at least two major purposes for having students: compose and sing a war protest song, act out a dialogue, conduct mock interviews of soldiers, design a reflective piece of artwork, or write a creative poem about the war. One purpose is to enable the teachers to determine the overall enrichment the unit provided, offering a cumulative means of assessing the students' multifaceted knowledge of Vietnam. For the students, the project allows them to personalize their appreciation for the unit and the content they enjoyed the most. Projects will make up twenty percent of the final unit grade.

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## THE EUROPEAN EXPERIENCE

### Names and Majors:

Wendy Blanton. ....	History
Tina Jones. ....	Business
Leonore Ulaszek. ....	Mathematics
Charles Watkins . ....	History

### Subjects Integrated:

<i>Art History:</i>	European art and its relation to history
<i>Business:</i>	Study international business and learn to use Power Point for presentations
<i>English:</i>	European literature and its relation to history
<i>History:</i>	Countries of Europe and specific places and events
<i>Mathematics:</i>	The geometry of the Eiffel Tower and the Leaning Tower of Pisa

### Objectives:

Students will be able to identify and understand various European cultures and countries through the study of European history, literature, architecture and social foundations. Students will then create a web page (or for schools without Internet access, a portfolio) culminating the subjects integrated.

### Rationale:

It is important for students to learn about cultures and countries different from their own; with new technological breakthroughs the world is practically at our fingertips. This unit will, in addition, help develop organization, research, technological literacy, and communication skills that will enhance a student's personal life as well as their academic career.

### Resources Needed:

- The Geometer's Sketchpad
- Internet access
- Maps of Europe
- Art slides
- Power Point
- International Business Export
- Currency Exchange Rates
- *The Hunchback of Notre Dame* (or other such reading material)

## Unit Description:

This project will last for a full semester and is intended for those students who are in the tenth grade, specifically for those high schools with access to the Internet. This project can still be used in schools without access; the difference being in the overall evaluation that will determine a student's grade. A portfolio could be developed instead of a web page; however, the portfolio would include the same types of material found in the web page. Specifically, the web page would incorporate everything the students had learned in the related subjects. For example, if France is one of the countries included, then a hyperlink would be established. This allows the students to describe the history, include pictures of famous or historic places, explain the currency and exchange rates, or anything else that they have learned throughout the course of this unit. At the teacher's discretion, this could involve collaborative or individual work.

## NOTE: FRANCE WILL BE USED TO ILLUSTRATE SPECIFIC CONTENT

*Art History and Literature:* The students will select literature and art from various locations and periods to support historical study. The art class would study the French Impressionists while the English class read *The Hunchback of Notre Dame*. From this students will analyze the cultural aspects of France.

*Business:* The students will learn how to prepare a presentation using Power Point which will include aspects of the currency exchange rate and international business. The currency would be identified and explained, by having students learn how to convert from dollars to francs. Businesses such as EuroDisney would be discussed, as well as international travel prices and procedures.

*History:* Countries from Europe will be selected based upon student interest. Students will learn about the various time periods, historical events that have occurred, and analyze the impact this might have had upon the populous. Students will select something of historical importance from any of the countries of interest. They will then give a presentation to the class based upon the information that was discovered.

*Mathematics:* The students will create a model of either the Eiffel Tower or the Leaning Tower of Pisa. Extensive study of the geometry of these structures will provide a solid basis for further development.

## Activity Description:

Along with the above mentioned activities, opportunities will be provided for individual and group work. Students will experience the European culture via the Internet and guest speakers. The speakers may range from travel and international business agents to architects, or family members who have traveled or lived in Europe. The students will have an opportunity to inquire about the lifestyles of various nationalities. Ultimately, the students will create an atmosphere in their classroom similar to that of Europe. Parents, students, and the community will be invited to an exhibit of European culture. This event would have models of the Eiffel Tower/Leaning



Tower of Pisa, a collage of various artwork, and Power Point presentations. The climax of the evening will be the demonstration of the web page, the European Experience.

#### **Evaluation:**

Aside from the web page development, students in each group will submit the following:

*Art History and Literature:* Students will select various examples of art and literature. Social correlation's must be drawn between the chosen material and history. This can be done in hard copy for the portfolio or by the use of the web page.

*Business:* Power Point presentations will be developed to explain currency exchanges and international business. Students will prepare a one page paper on a specific international product using the Internet.

*History:* Presentations will be given based upon the countries that the students selected. Students must analyze the cultural and historical aspects of that country and explain the importance of historical analysis.

*Mathematics:* Students will complete an oral or written objective test based upon the geometry of the structures studied. This objective test may revolve around their model and why certain shapes and angles were used in construction.



## **POLLS, PRODUCTION, AND POLITICS**

Christopher Bellizzi - Social Sciences

Chip Finck - Industrial Technology

David Green - Business Education

Jennifer Knuth - Business Education

Amy Quattrone - English

### **Subjects Integrated:**

Social Sciences: The election process and the Social Sciences.

English: Composition and literature related to the American Government.

Industrial Technology: Planning, power, and problem solving in the production of an election.

Business: The role of accounting and marketing in a an election campaign.

Math: Producing, distributing, and analyzing a political poll survey.

Art/Music/Drama: Incorporating the Arts into the Presidential Election.

### **Objectives:**

#### **Social Sciences:**

- Students will be able to demonstrate knowledge of the election process.
- Students will be able to explain the importance of the election headquarters.
- Students will be able to relate the United states election system to election systems of other countries.

#### **English:**

- Students will be able to compose speeches and newspaper articles/editorials related to campaign issues.
- Students will be able to effectively run a weekly newsletter.
- Students will also be able to relate the campaign process to their own lifestyles through written work and related literature pieces.

#### **Industrial Technology:**

- Students will demonstrate their ability to use the Internet efficiently and effectively.
- Students will demonstrate their ability to solve lighting and acoustical problems with the auditorium.
- Students will demonstrate their ability to incorporate new ideas and modifications into their drawings to scale accordingly.

#### **Business:**

- Students will be able to prepare a budget for planning purposes, while keeping track of the campaign funds.
- Students will also effectively run an election campaign using the forms of promotion.
- Students will be able to conduct a survey and evaluate the results.

#### **Art/Music/Drama:**

- Students will demonstrate the ability to solicit funds and the ability to expand their creativity.
- Students will demonstrate the ability to sing/play music characteristic of the American society
- Students will demonstrate the ability to write a research paper and appropriately costume a Presidential candidate.

## **Rationale:**

The United States Presidential Election exercises the power of the people to have an impact upon the future of the nation. As future members and leaders of the nation, students need to have a firm understanding of the election process. The election process is more than just a lesson in government, it also incorporates many different aspects of a high school curriculum. Therefore, it is the responsibility of the educators of today's youth to show how these various subject matters relate.

## **Resources Needed:**

TV, VCR, films, newspaper articles, JFK text, speech writing text, clips of Presidential speeches and debates, anthology with "In the American Society" and "The Fourth of July" poems, Auto Cad R13, calculator, Internet software, desktop publishing software, materials for construction of stage and voting booths, Sim City, Industrial Technology text, art materials (paint, posterboard, etc.), accounting text, marketing text, sheet music, instruments, clothes, hair products, and make-up.

## **Unit Description:**

This four week unit is intended to give 12<sup>th</sup> grade students the opportunity to work together in an effort to run a successful Presidential debate and election. The students will learn the "essentials" of a Presidential campaign in each discipline, and will apply their new-found knowledge towards a fundamental goal - the debate and election. By giving the students "hands on" experiences in each of the disciplines, they will realize that their efforts and their votes are needed to make a difference in the U.S. government. Below is a description of the integrated curriculum:

**Social Science:** The Social Science curriculum will consist of units on the history of the voting process, election processes in other countries and their relation to the U.S. system, a visit to an election headquarters and a guest speaker from the mayor's office to explain how the voting process effects society. Students will also participate in a debate and a mock election. This curriculum will compliment the other subject areas by providing a background on the election process.

**English:** This unit will focus on the writing process and how it relates to the Presidential election. Students will participate in a variety of writing activities, including the composition and lay-out of a weekly newsletter pertaining to each party's platform. Students will also learn to compose speeches (related to the Presidential campaign), and will be asked to deliver these addresses to their classmates. The speeches will then be judged, whereupon the two winners will have them read by the two Presidential candidates in the mock debate. The students will learn how to write non-biased newspaper articles and/or editorials, and will submit their articles to the newsletter staff for possible publication. In addition, the students will also focus on literature related to the United States government, and how it reflects their own lifestyles. Students will read two poems, "In the American Society" by Gish Jen and "The Fourth of July" by Howard Nemerov, and will be asked to relate the poems to the current election and to their own lives, using the reader response method. They will also be required to view selected clips of the movie, "JFK." Meanwhile, they will partake in discussions of the relevance of the movie and book and will follow up with a written assignment related to these discussions.

**Industrial Technology:** Production: Students will search the Internet and retrieve information off the World-Wide-Web. While competing within groups, students will interact with the community in conducting surveys and pricing material. The class will choose a final production model and work with the Communications, Transportation, and Energy Utilization classes on the final product. Energy Utilization: Students will solve lighting and acoustical problems within the auditorium by studying, analyzing, and modifying the auditorium lighting and acoustical arrangements. They will develop a cost and materials list which will be submitted to the Accounting and CAD classes. Students will also work with the Production class to incorporate their equipment into the final production. Communication/CAD: The students will incorporate new ideas and modifications into their drawings to scale accordingly to the demands placed on them by the Production, Energy Utilization, and Transportation classes. Communication/Graphic Arts: Students will divide into groups and compete with the class. They will search the web and library for slogans, mascots, and themes for the election. The groups will incorporate their ideas and work with the Business and Art classes to produce their products. Transportation: These students will work with the Math students to collect the surveys. They will evaluate the seating arrangement of the mock debate submitted by the CAD class, with emphasis on heavy traffic areas and make modifications where necessary. Students will do a mock simulation using transportation software (Sim City).

**Business:** The accounting students will learn the proper procedures for planning a budget. This budget will be used as a basis for the campaign budget. Students will also learn the procedure for keeping track of donations and expenses associated with the campaign fund. These students will have to account for all the money going in and out of the project, therefore, they must work with all the other classes. The marketing students will visit an advertising agency to learn how campaigns for new products are put together. Upon returning from the trip and using the information learned in class, the students will apply their newly learned knowledge in designing a campaign for a Presidential candidate. Not only will they design the campaign based on the marketing principles, but they will prepare the campaign. The students will be paired up with other students from English, Social Sciences, Industrial Technology, Art, Drama, Music, and Math to discuss and assist each other in preparing the campaign which in effect is preparing for the debate and mock election. The students will use their knowledge of advertising, promotion, and public relations to effectively sell the ideas of their candidate to the public.

**Math:** The math students will construct surveys for conducting poll research. After conducting these research polls, these students will analyze the results statistically to come up with conclusions as to which candidate is winning in the public eye and why. Thus, along with Industrial Technology, they will prepare, distribute, tally, and analyze the polling surveys.

**Art:** The students will "team up" with students from various disciplines, specifically those of Industrial Technology and Business, in a effort to create posters, bumper stickers, advertisements, and other assorted election paraphernalia. These items will be used throughout the campaign, and will be specifically utilized in the debate itself. Also, the students will be responsible for painting the stage and the booths used in the actual election.

**Music:** Students will learn to play various "patriotic" songs such as , "America the Beautiful" and "The Star Spangled Banner." These songs will be performed at the debate.

**Drama:** Two students will be chosen (based upon their abilities and knowledge demonstrated through various activities) to play the parts of the two Presidential candidates. They will rehearse their parts, while learning to mimic previous Presidents' actions from past recorded debates. Other students will rehearse their parts of the media crew, which they will play at the debate. The students will also focus on a writing activity in which they will view the movie, "Out American Cousins" (they play Lincoln was watching when assassinated) and write a research paper on the topic. Selected students will be asked to apply the make-up for the debate, pick out the appropriate clothes, and to style the candidates' hair.

**Activity Description:**

The students will participate in activities intended to provide them with hands-on experiences. The following disciplines will include these activities:

**Social Science:** The mock election will consist of students that are participating in all the different subject areas. They will listen to debates between student candidates and will vote for the candidate that they feel will do the best job in office. The field trip will give the students a first hand understanding of the election headquarters and how they advertise and raise money for the campaign. The project on other governments' elections will give the students a multicultural view of government in other areas of the world. The guest speaker will show the students that everyone's vote has an impact on the nation.

**English:** The students will be offered an extra credit opportunity to explore the World-Wide-Web of politics and to write a paper based on these experiences. The students will also engage in a field trip to a local newspaper to examine how the paper is run. This will give the students the opportunity to apply the information they have received to the running of their weekly newsletter.

**Industrial Technology:** These students will help conduct the surveys. They will also have the responsibility of construction and production of the stage and voting booths. The students will take a field trip to Construction Cite. A guest speaker will also visit the class.

**Business:** The marketing students will take a field trip to an advertising agency. They will also have scheduled meetings with other disciplines such as Art and Industrial Technology to plan and produce the flyers, bumper stickers, posters and other election advertisements. A representative from a democratic or republican party's headquarters will act as a guest speaker to help students understand what it takes to put on a debate and to advertise a campaign.

**Math:** The math students will have a guest speaker from the Census Bureau who will help them to understand what makes a good survey and how to tally up and make conclusions of the results.

**Art:** Students will solicit local paint and hardware stores in an effort to obtain discounted supplies.

**Drama:** Students will be required to solicit local department stores within the community in an effort to obtain discounted (or borrowed) clothes.

### **Evaluation:**

The students will be evaluated in each discipline in the following assignments:

**Social Science:** The students will write an essay on the election process and how it effects their society. The students will write an essay on elections from another country of their choice and compare and contrast the two processes for evaluation purposes. Through an evaluated portfolio, the students will critique the election process and suggest ideas to improve it, while describing the importance their suggested changes will have on society.

**English:** The students will be graded on the quality of their speeches, the appropriateness and quality of their columns and/or editorials, and the proficiency of their responses to the "JFK" activity.

**Industrial Technology:** The students will be graded by a teacher evaluation of how much time and effort was put into the project, a peer evaluation, assignments, and a portfolio.

**Business:** The students working on the campaign and budget will be evaluated by writing an essay about the skills of marketing which are transferred over and used in a real campaign. They will also be evaluated on the various activities and assignments completed throughout the unit. And finally a peer evaluation will also be taken into consideration.

**Math:** These students will write a paper based on the results of their surveys. This paper will summarize and compare the outcomes and analysis of the polling surveys.

**Art:** Students will be asked to keep a written journal of time and experiences spent on the unit. They will be graded on their effort displayed in the journals and in the creativity of the journals themselves.

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## STARTING AN NFL EXPANSION FRANCHISE

TEAM MEMBERS	DEPARTMENT	PROJECT AREA
Brian Bergstrom	Biology	Biology
Jennifer Bloyd	History	Geography
Aaron Eddy	History	History
Greg Leban	Business	Marketing
Eric Kuffel	Business	Legal requirements

**RATIONALE:** Football represents a huge portion of the organized sports system in the United States of America. Many students may feel that they know a lot about the NFL, but creating one from scratch will show them the numerous disciplines that are involved. The students will see how biology, geography, history, and business are related and very important in order to create an NFL expansion franchise.

**RESOURCES:** Books, newspapers, library resources, football stadiums, and various professionals that are related to the experience.

**OBJECTIVES:** Each of the following disciplines have their own objectives. They are in the form of the student will be able to..., and are as follows:

**Biology:** understand the compositional differences between stadium grass and Astroturf. They will also compare and contrast the injuries related to each type of playing surface. Also, they will understand how each injury physiologically and anatomically affects the human body. Students will use scientific techniques of analysis to achieve the objectives.

**Geography:** explain how geography plays an important role in determining where an NFL franchise team will be located. Students will demonstrate the ability to read maps and explain which geographic regions are best suited for the team that is being created.

**History:** have a better understanding of how football originated, and know important figures in the formation and progression of the NFL.

**Marketing and legal requirements:** identify the marketing aspects of the experience (team colors, logo/nickname, target markets/advertising/promotion) of starting an NFL franchise. Students will know how to use the internet and other resources to identify the laws, the funding needed, and corporate structures related to starting a professional football franchise.

### DETAILED DESCRIPTION OF UNIT:

There are numerous areas that are involved in creating a professional football franchise. In order for students to understand how each discipline is related to the creation of a team they must go through each step through direct experience. So, the following subject areas attempt to show how each subject is related to the process, and then teach students about the related aspects of that particular subject. It is important to note that the unit is based on the idea that the creation of a franchise is a **process** that involves many subjects, and there is less emphasis placed on subject content.

In the **biology** unit, students are going to make various comparisons using analytical techniques that are often used in science. This approach will enable students to make conclusions based on observations and facts. Specifically, students will compare the different types of playing surfaces that are presently used in football stadiums. Also, students will compare and contrast the injuries that are related



with each of the different playing surfaces. Once the students know about the various injuries they will understand how they affect the human body. Ultimately, this unit forces students to think like scientists and make a decision on what type of playing surface they will have in their stadium.

In the **Geography** unit , we will provide a general overview of the importance geography plays on selecting a location for an NFL franchise. This will be accomplished through a brief lecture, slides, review information from community development agencies, and other primary services. The specific topics that will be addressed are how industry, climate, and accessibility are important factors in choosing a successful NFL location. Students will examine climate information and community development statistics to determine the best location for the new franchise.

In the **History** unit, a comprehensive history of the NFL will be presented. An understanding of how the NFL has evolved from its creation to the present-day organization. Students will be presented with the various teams that have played important roles in the development of the NFL and how those teams originated. All of the information will be presented through lecture and class discussion.

In the **Marketing** unit, we will provide students with a general overview of how to choose team colors when appealing to new customers or fans, how to choose the team logo and nickname, the target markets they have to focus on, and the advertising and promotion that has to be done when starting an NFL expansion franchise. This will be accomplished through lecture, discussion, and worksheets with the students on how to go about making these important decisions. Once the information is presented, the students will be put into groups to make decisions about the team colors, logo and nickname, and the target markets/advertising and promotion of their expansion franchise.

In the **legal** unit, we will provide students with background activities of a real professional football team front office. The students will describe the organizational structure and vote on a president, vice-president, general manager, and coach.

#### **ACTIVITY AND EVALUATION**

Students will be evaluated on a basis of teacher observation and worksheets. The students will be required to participate in a stadium field trip. Also, any professional individuals that are relative to the experience and that can be acquired should used to supplement the learning experience. For example, the biology lesson will have guest lectures from a head groundskeeper and an athletic trainer. The main focus of the experience is to have the students actively participating in the process because their learning experience will be maximized.

## An integrated study of the impact of logging



# Timber!!



### on the spotted owl's struggle to survive

#### NAMES AND MAJORS:

Business Education: Steve Klokkenga, Jay Wachtel; Biology Education: Bill Gipperich, Elise Aumann.

#### SUBJECTS INTEGRATED:

**History:** A historical analysis of the role of government in the preservation of natural resources.

**Biology:** The effect of logging on old growth forest ecosystems.

**Mathematics:** Mathematical relationship between owl population and tree density.

**Industrial Technology:** The role of logging as a means of obtaining primary construction materials, and the application of these materials in the construction of a log cabin.

**English:** Writing a persuasive essay providing supporting arguments on the spotted owl debate.

**Business:** The economic implications of logging versus preservation of spotted owl habitats.

#### OBJECTIVES:

**History:** Students will construct and present a timeline explaining the legislative and executive protections enacted by the federal government to safeguard the nation's natural resources.

**Biology:** Students will illustrate, using physical models, at least two aspects of an old growth forest ecosystem, which could include food webs, trophic levels, and energy cycles.

**Mathematics:** Students will be able to calculate a series of problems relating owl populations and forest density.

After completion of the unit, students will be able to apply skills and knowledge developed through the six integrated disciplines by actively participating in a debate concerning the dynamic relationship between humans and the environment, specifically the future of logging in spotted owl habitats.

**Industrial Technology:** Students will demonstrate knowledge of log cabin construction by designing a blue print, materials list and itemized cost list.

**English:** Students will be able to construct a persuasive essay providing at least five arguments for or against the logging of spotted owl habitats.

**Business:** Students will be able to list and explain five financial impacts concerning logging and the spotted owl.

#### RATIONALE:

The logging of spotted owl habitats is a topic of much current debate. Many students may have a position on this controversy; however, by studying this issue as related to the six subject areas, they will be able to take a position based on facts rather than purely emotion. The study of this topic in an integrated curriculum will demonstrate two major themes to students. The first theme is that subjects covered in a high school course actually have some bearing on real life situations. The second theme is that knowledge and skills in many different subject areas are all combined in not only the logging-spotted owl debate, but also in many other issues in society everyday. By showing students the process of approaching issues from many aspects, they will be more prepared to engage in debates concerning societal issues. The students will also see that not all questions have yes or no answers, and that many problems are multi-faceted.



**RESOURCES NEEDED:**

The book *Silent Spring* by Rachel Carson  
Various magazine and journal articles  
Owl pellets for skeletal reconstruction activity  
A large open room for the final debate concerning the fate of an owl habitat  
Miscellaneous charts, overheads, transparencies  
Guest speaker from Illinois Department of Natural Resources  
Materials for physical representation of ecosystems

**UNIT DESCRIPTION:**

This unit is designed as a three week integrated unit. Some aspects of the unit will be taught in a fully integrated setting, whereas other areas will be taught in parallel. The students will be given the opportunity to combine knowledge and skills attained from all disciplines in preparation for a final debate. The students will be involved in a number of activities including field trips, projects, and guest speaker lectures.

Through the **History** portion of this unit, students will learn, through research, class discussions and lectures, about the evolving role of our government in the preservation of the nation's natural resources in order to put the current debate in a historical perspective. They will study the legislative and presidential initiatives which have been enacted and are in effect today, and construct and present a timeline summarizing this information. By taking a field trip to the Patton Log Cabin, the students will also look at the history of the logging industry and the log cabin in the United States. This information will compliment students' explorations in the fields of Biology and Industrial Technology.

The **Biology** component will have students study the many components of an ecosystem such as trophic levels, water and nutrient cycles, producers, consumers, decomposers, and biomass. They will explore the role of individual species as a part of an ecosystem. The students will also research both the habitat requirements of the spotted owl and the role of the spotted owl in its ecosystem. At the end of the unit they will be able to determine the effect that logging of owl habitats will have on the population of the owls as well as on the other living members of that old growth forest habitat. In conjunction with the History and English components, students will read Rachel Carson's *Silent Spring* and discuss its role in the shaping of our government's environmental policy, specifically with the use of the pesticide DDT.

The **Mathematics** section will focus on learning new problem solving techniques. The skills which are being developed in this discipline will be applied to the problems presented in the Industrial Technology and Business areas. The students will also utilize mathematical formulas to determine the correlation between owl population and tree density. The statistical analysis of these populations over time will allow students to discover the correlation between both populations. This data can be applied not only in the projects being produced in the other disciplines, but in the culminating debate as well.

The **Industrial Technology** segment will focus on the construction of log cabins. The students will study how log cabins are constructed and the materials used in the construction of a log home. The students will apply mathematical skills in the calculation of material requirements and costs for a log home they will design. The field trip to Patton Log Cabin will allow the students to look at the historical aspects of log home construction. By comparing the Patton Cabin to more modern structures, they will be able to determine how construction techniques have changed over time.

The **English** component will have students analyze the information gathered in the other five disciplines in order to discover their own position on the logging-spotted owl debate. Students will then create a persuasive essay defining their viewpoint, and defending it with supporting facts and logical arguments. This will serve as a pool of information to be used in the final debate. Also, the students will read Carson's *Silent Spring* and discuss the ideas presented in it and how these ideas relate to modern environmental problems. These discussions can help the students explore and further define their own positions.

The **Business** element will cover the financial effects of the debate. There are economic costs associated with both the preservation of owl habitats and the use of these habitats for logging. The costs which will be discussed will include, but are not limited to, the land maintenance cost of either the forest or deforested region, cost of trees and their value to the logging industry, public relations costs, and the cost of the legal battle. Political, social, and environmental costs will also be discussed, but not quantified in dollars. Student will study these issues and prepare a culminating paper addressing the costs on each side of the argument. The paper will determine the economic costs through the use of historical data and mathematical calculations.

### ACTIVITY DESCRIPTION:

- Students will be able to put information into chronological perspective by constructing timelines showing key legislation and specific examples of governmental involvement in the protection of natural resources throughout our nation's history, and present these timelines to their peers.
- Students will demonstrate an understanding of the changing role of government in environmental protection by writing position papers on the current logging debate from various historical perspectives.
- Students will take a field trip to a forest ecosystem and apply information they have learned about ecosystems such as trophic levels, water and nutrient cycles, producers, consumers, decomposers, and biomass, to real world experiences.
- Students will reconstruct small mammal skeletons from regurgitated owl pellets.
- Students will read Rachel Carson's *Silent Spring* and discuss it's role in the shaping of our government's environmental policy, specifically with the use of the pesticide DDT.
- Students will create physical models illustrating at least two aspects of an ecosystem.
- After a visit to a log home, students will create drawings of the log home they would build given a set budget. This would include a materials list and associated cost calculations. The students will also incorporate the history of log homes and how they have changed over time.
- Students will write a persuasive essay detailing their viewpoint on the debate. The essay will include at least five supporting arguments.
- Students will organize and schedule outside speakers from local environmental organizations (local example-Student Environmental Action Coalition) as well as speakers supporting individual's property rights and limiting of governmental regulation (example-Libertarian representative) to discuss both sides of the debate, as well as invite a speaker from the Illinois Department of Natural Resources.
- Students will create a table detailing costs of logging the region versus protecting the region. How has it changed over time? How do the logging benefits compare to the environmental costs?
- The final project of the unit will be a debate concerning the logging industry's request to log in a forest which also serves as habitat for the spotted owl. Students will take the position of either an environmental activist or a logging industry representative and argue their positions at a mock town meeting concerning the fate of a parcel of spotted owl habitat. The students' persuasive essays will serve as resources for the debate.

### EVALUATION:

Students will be evaluated on their written work, oral presentations, constructed projects, as well as through objective and essay tests. The unit will be worth 600 total points distributed equally between the disciplines (100 points each).

History-Students will be evaluated on their constructed timeline(50), peer presentation(25), and position papers(25).

Biology-Students will be evaluated on their mammalian skeletal reconstructions(15), ecosystem models(35), as well as a combination essay and objective test(50).

Mathematics-Students will be evaluated on the accuracy of their owl density calculations(25) as well as an objective test(75).

Industrial Technology-Students will be evaluated on their log home blueprint(60), materials list(20) and cost analysis(20).

English-Students will be evaluated on their persuasive essays(60) and their public speaking skills(40) demonstrated in the mock town meeting.

Business-Students will be evaluated on accuracy and thoroughness of their table(40), as well as their written analysis(60) of the costs and benefits associated with logging spotted owl habitat.

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In Egyptian mythology, the Phoenix was a bird that is consumed by its own ashes after a 500 year life span. The Phoenix has come to represent death and rebirth.

Jessie Barnett	Mathematics/Statistics
Dylan Barth	English
Jim Darnell	Industrial Technology
Beth Knottnerus	English
Mark Molinari	Industrial Technology
Jeff Pawlak	English
Brian Schwarzentraub	Business
Margaret Zumstein	Science/Wellness

## **Subjects Integrated:**

**Business:** Specific Application of Business in the Funeral Industry

**English:** Works of Literature Generated by the Theme of Death

**History:** Historical Rituals and Their Effect on Civilization

**Industrial Technology:** Technical Aspects Involved With Death and Dying

**Mathematics:** Geometric Aspects of Design

**Science:** Anatomical and Physiological Aspects of Death and Living Things

**Statistics:** Statistical Aspects of Death Rates

**Wellness:** Explanation and Prevention of Major Causes of Human Death

## **Rationale:**

As the old saying goes: "The only things certain are death and taxes." As this quote demonstrates, death is an inevitable part of life. And yet so much mystery surrounds this subject. For centuries, death has been a relatively taboo subject, even today, this topic seems to be off-limits. The purpose of The Phoenix Project is to demystify death by examining it in a cross-curriculum forum. This subject is best handled this manner because it enforces the universality of the subject. By heightening the awareness of students to this topic, they will be better equipped to face any loss they may have to experience. To enable the students in this goal, they will plan and construct a school memorial in celebration and recognition of this part in the cycle of life.

## **Objectives:**

The students will be able to plan, develop, and construct a school memorial of their own design. Examples of a school memorial include a statue, a garden, a fountain, or anything else the students can devise.

### **Business**

The students will be able to list three differences in the marketing mix between the funeral industry and other service industries.

The students will be able to develop a budget and be able to itemize costs pertaining to a funeral.

The students will be able to budget for the memorial.

### **English**

The students will be able to identify cultural beliefs of the afterlife from various mythologies, such as Greek, Roman, Egyptian and Native American.

The students will be able to create essays, response journals and obituaries in response to prose literature involving death as a theme.

The students will be able to explain different aspects of death in poetry.

### **History**

The students will be able to classify historical burial rites throughout different cultures.

The students will be able to recognize the effects death has had upon various civilizations.

### **Industrial Technology**

The students will be able to explain and describe the history of technology about death and dying.

The students will be able to discuss modern manufacturing processes and production techniques as well as developing new advances in those areas.

### **Mathematics**

The students will be able to identify and calculate areas and volumes of prisms, pyramids, cylinders, cones and spheres.

### **Science**

The students will be able to explain clinical death in plants and animals.

The students will be able to explain the physical processes concerned with human death.

### **Statistics**

The students will be able to identify and calculate basic statistical elements such as mean, median, mode, variance and standard deviation.

The students will be able to use the standard normal curve to find percentage and probabilities of specific populations and events.

The students will be able to use the correlation coefficient to determine the relationship between two sets of data.

### **Wellness**

The students will be able to list and explain the top ten causes of death in the United States.

The students will be able to list and explain at least two preventative measures for each of the top ten causes of death.

## **Resources Needed:**

### **Business**

*National Standards for Business Education*

Local Funeral Homes

### **English**

*Toning the Sweep* by Angela Johnson

*After the Rain* by Norma Fox Mazer

*Ordinary People* by Judith Guest

*Death Be Not Proud* by Gunther

"The Fall of the House of Usher" by Edgar Allen Poe

*The Death of Ivan Ilych* by Leo Tolstoy

*The Red Badge of Courage* by Stephen Crane

*Beloved* by Toni Morrison

Poems of Emily Dickinson

Poems of Sylvia Plath

"In Memoriam"

*Bulfinch's Mythology*

### **Industrial Technology**

Tools and resources are necessary for the construction of the school memorial

Books and reference material about the processes used in the memorial

### **Science**

Instruction Model of Human Beings

Animals for Dissection Purposes

Appropriate Science textbooks

## Unit Description:

All curriculums will be involved in building the school memorial. The students will be responsible for the actual planning, development, and construction of this memorial. In the classroom, they will learn the skills necessary to complete the project as well as engaging other topics related to death.

**Business:** All areas of business education can be incorporated into the death and dying unit. Marketing, Consumer Economics, Accounting, and Management will be integrated specifically. In Marketing, students will learn how the funeral industry applies the marketing mix (product place, price, promotion) to everyday business. Accounting standards are also stressed in the unit, and students will learn how accounting in the funeral industry varies with other fields. Because dealing with death is a delicate subject, students will learn what types of characteristics managers of funeral homes need to deal with people, specifically what management style works best.

**English:** The unit will begin with a study of mythologies representing a variety of cultures. The students will study Greek, Roman, Egyptian and Native American mythologies with regards to each cultures view on death and the afterlife. The students will then study various types of poetry which revolve around the topic of death and dying. Students will participate in journal writings to explore their ideas of various works. Additionally, students will be asked to create their own poems involving any aspect of death (idea, life, themes). After poetry will come a section on prose engaging the theme of death and dying. Students will read a variety of prose (*Ordinary People*, for instance) and respond to it through essays, journal writing and obituaries. Students will finally learn the correct methods of researching and writing research papers for the project they will be working on in Wellness class.

**History:** Students will study various world cultures and their attitude towards death and dying. This will relate directly to the English discussion on world mythologies throughout the ages. Students will study burial rites around the world and their effect on those cultures. Students will also determine how death and dying has affected certain civilizations (the Civil War in the United States, for example).

**Industrial Technology:** This unit will include discussion on techniques used in areas concerning death and dying; including production of memorials, headstones, coffins, and other subjects. Students will then have a hands-on experience on production and manufacturing. They will also use existing technology to develop new methods for future use.

**Mathematics:** This unit topic is 3D/solid geometry, which is a basic unit in most geometry classes. The focus will be on learning the parts of various solids and how to calculate areas and volume. The applications will be related to the project, and examples can be given throughout the unit that will tie into the theme. Specifically, students will calculate lateral area, total area, and volume for various caskets. Students can use this unit of geometry in conjunction with the industrial technology design of the memorial statue.



**Science:** This unit will begin by discussing what death is in plants and animals, including differing views of actual clinical death in living things. The next topic of the unit will be human anatomy and physiology. In this portion of the unit, the human pulmonary, respiratory, nervous, digestive, and excretory systems will be covered. This information will tie directly into the unit in Wellness class.

**Statistics:** This unit will begin with an introduction of basic terms of statistics and graph applications. Much of the data used will come from the topics of death causes studied in the Wellness unit. The standard normal curve can be used to determine the leading causes of death various populations. Students can also use the correlation coefficient to speculate some of the causes of death.

**Wellness:** This unit will include a detailed explanation of the top 10 causes of death in the United States at the current time. This unit will tie in with the Science unit. Also included in this unit will be discussions of possible measures that can be taken to prevent these causes of death. The students will also do research to find the top 10 causes of death in the world, their state, and their country and compare this data to the U.S. This project will tie in with part of the Statistics unit.

### **Activity Description:**

**Business:** Students will prepare a budget for the memorial project, including the costs for the memorial. Students will work closely with Industrial Technology.

**English:** Students will read various poems and silently write about their feelings upon reading the poem and their overall reaction to the piece. They will then exchange their ideas and respond to each other's feelings on poems relating to death.

The teacher will have the students choose a fictional character from a fairy tale, nursery rhyme, story or play and write an obituary for the character.

Students will also create a daily response journal in which they will explore their responses to class discussions and reading assignments.

Students will read the novel *Ordinary People* and compose a 5 page essay on the morality of suicide.

**Industrial Technology:** The bulk of the activities will revolve around the school memorial project. The students will not only develop the memorial in this class but will also actually construct it.

**Mathematics:** The students will visit a funeral home so that students can see different caskets. Then they will calculate the areas and volume of a few caskets and determine which provides the most space for the least amount of money.

The students can observe an IT lab to take measurements of the proposed monument and determine if it will be appropriate for the space allotted. They should take into consideration the problems associated with the height of the monument as well as base area for aesthetic and practical reasons.

**Science:** Students will participate in lab sessions using animal dissections and the instruction model of the human being. A guest speaker from a local hospital will speak about the process of an autopsy and explain organ donation.

**Statistics:** Students will estimate a life expectancy for themselves based on the information they are given in the Wellness unit and on their own personal backgrounds. They will be encouraged to research family medical history and examine their own

lifestyles (smoking, reckless driving, asbestos). They will be encouraged to further research the leading causes of death. The compilation of this data will utilize the statistics studied.

**Wellness:** The students will research the top 10 causes of death in the world, their country, and their state, and develop a research paper. In English, students will learn how to research and write a professional research paper. The students will also create a poster displaying preventative measures for one of the top ten causes of death in the United States.

### **Evaluation:**

**Business:** Students will be evaluated on the overall completeness of their budgets and characteristics of the marketing mix through written examination.

**English:** Students will be evaluated on their understanding of the presented texts through multiple choice tests, essay tests, and creative writing assignments.

**History:** Students will be evaluated on their ability to classify various burial rites throughout history on a written examination. Students will also be evaluated by an essay examination determining the cause and effect relationships these rites have had on various cultures.

**Industrial Technology:** Students will initially be evaluated on content through written quizzes. The bulk of the evaluation will come through hands-on experience working with the various materials for the memorial.

**Mathematics:** The majority of the evaluation will be done through the final outcome of the monument. Of course homework and quizzes can be combined as well. The students will also be evaluated through their models of caskets for creative or artistic ability, but with most emphasis on mathematical applications.

**Science:** Students will be evaluated first by written examination on the clinical death of living things and the way in which the human body functions. The second means of evaluation is how well the students are able to perform the animal dissections.

**Statistics:** The evaluation will be done with the activity. It will be based on the amount and depth of the statistics used to estimate life expectancy, as well as accuracy.

**Wellness:** Students will be evaluated by written examination on the major causes of death and preventative measures that can be taken to prevent these causes. They will also be evaluated on the quality of their research project.

### **References:**

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**TITLE: DECISION TO INTEGRATE '96**

**NAMES AND MAJORS:**

Elizabeth Eddy: Political Science

Troy Howe: Business

Angelique Morgason: Biology

**SUBJECTS INTEGRATED:**

Political Science: The political election process

Business: The budgeting and marketing for political elections

Biology: Analyzing the effects of human social events on the environment

\*English: Writing persuasion speeches

\*Industrial Education: Designing and building sets

\*Home Economics: Planning and preparing banquets for large groups

\*recommended subjects to include.

**OBJECTIVES:**

- 1) Students will apply their knowledge of the election process to elect a teacher of the year.
- 2) Students will work in group settings.
- 3) Students will demonstrate use of technology through designing campaign videos, record keeping, and analyzing scientific data.
- 4) Students will practice communication skills to promote candidates.
- 5) Students will adhere to given budgets.
- 6) Students will apply the methods of the scientific inquiry to analyze the effects of large social events on the environment.

**RATIONALE:**

Students live in a democratic society that is dependent on the electoral process. After graduation, students will be expected to participate in electing government officials. This unit will not only teach students about the election process, but will also emphasize the importance of participation. By working in groups, students will understand the many roles that are dependent upon each other, including many crucial supporting roles in the election process.

**RESOURCES NEEDED:**

Books and Articles for research

Video Equipment

Construction Materials

Food Supplies

Videos of past presidential campaigns/elections

Contacts for local recycling agencies

Computer laboratory

**UNIT DESCRIPTION:**

Political Science:

The goal of the political science students will be to understand and respect the many roles in an election. Students will start by forming nominating committees. Each nominating

committee, will select a teacher candidate. Then students will work with the English department in creating a short profile of each teacher candidate. Then students will circulate a nominating petition and the profile among the student body to gain support for their candidate.

After the petitions have been signed and turned in, a primary election will be held. Students will work with the industrial technology students in designing a polling place. After the primary elections are held, students will mount a full campaign. Graphic artists will become part of the campaign team by designing posters and newsletters. Political science students and art students will have to keep in line with their budget, as established by business students (campaign finance directors). All students will work to gain funding from the outside community. Furthermore, English and journalism students will be called upon to create campaign slogans, biographies, and newspaper articles. The industrial technology students (audio engineers) will record the whole process on video.

Each campaign committee will present its candidate at the political convention. After giving the students a chance to compare and meet the candidates, a final election will be held. Students will become pollsters and polling judges. The votes will be counted and a winner declared. The winner will be honored at an inaugural ball designed by the industrial technology students and home economic students. The ball will be a united effort by all departments as the capstone event.

### Business

Business is needed to some extent in all areas, especially in the election process. There are many ways in which accounting, marketing and computers relate directly to an election.

In the accounting classes, of course money will be the major topic. For our election each campaign will have to adhere to a budget. It is the job of the accounting class to work with those controlling the campaigns so that there is an effective use of the money. Accounting students will learn how to correctly maintain records on each of the campaigns. These records include money coming in from fund raisers and donations, and also money going out or expenses. In addition to the campaign, the accounting class will be responsible for budgeting the inaugural ball that includes expenses for a recycling and waste management.

Marketing classes will be a major part of the election process, considering marketing the candidate "in a good light" is the entire goal of an election. Marketing classes will first learn how to market a person, working with those involved with the campaigns. They will also do simple market research into the student's perceptions of teachers. In addition, the marketing students will work in cooperation with environmental science students to promote an environmental friendly election and inaugural ball, using the mass media to promote waste management. Marketing also has the job of informing the school body through, use of newspaper and other materials, about their candidates and fund-raisers. This will fall under the area of advertising.

Computer classes will be behind the scenes, but play an important role. Students will learn in Word Processing about correctly typing, formatting, and proofreading material to be used in campaigns. Also material that will be printed in the school newspaper can be typed and proofread.

Special effects can also be achieved through the use of computers. Video presentations can be enhanced by using graphic packages in the Advanced Computer Applications class.

#### Biology:

In the unit, environmental science students in cooperation with the industrial education students, will choose environmentally responsible construction materials that will meet the needs of the inaugural ceremony. In addition, they will work with the home economic students to plan the inaugural ball dinner with food items and service ware that will allow for recycling. Students will learn the cause and effect of "green engineering" and how to incorporate it into the mass populated setting of an inaugural ball. The activities of this unit will be organized in the same manner as the scientific method.

For the observation stage, students will be expected to observe the habitat given to understand the entire abiotic and biotic environment. In doing so, students will be required to collect data about the given habitat. Students should form a hypothesis on what would be an environmentally safe design for the inaugural ball based on their observation and research. Students should be encouraged to use local recycling agencies as resources. When forming their design, students will work with business students to understand the preferences of the public as well as financial restrictions.

Students will test their hypothesis by monitoring the habitat during the award ceremony. Students should record the effects of the inaugural ceremony on the habitat (i.e. trampling on the flora or altering the pH of the soil due to spillage). In addition, they should ensure that the prescribed policies suggested are being upheld (recycling).

Finally, students will form a conclusion based on their data collected before, during and after the ceremony. They will determine whether or not their hypothesis was supported or not. If their hypothesis is not supported, students will be asked to do more research and reformulate their hypothesis.

#### **ACTIVITY DESCRIPTION:**

- 1) Have assembly to kick off the unit.
- 2) Interview teachers
- 3) Submit proposals and petitions
- 4) Have fund raiser campaign
- 5) Hold primary elections to narrow race to 5 candidates.
- 6) Hold Campaign '96
- 7) Hold Convention '96 to promote candidates
- 8) Hold Decision '96
- 9) Have the inaugural ball '96

Activities not listed included the preparation activities for the inaugural ball these include the following: planning budgets; constructing the set for the inaugural ball; preparing the inaugural dinner; and the monitoring of the environment during the inaugural ball.

## **EVALUATION:**

### Overall:

Students will be evaluated during a weekly meeting. The student body will be divided into sub groups which will be headed up by a faculty team leader. The team leader will assign goals to be accomplished each week. At the meetings, students will be asked to report on their progress. In addition they will be asked to make peer evaluations, which will evaluate team work.

### Political Science

Students will be evaluated by a 5-10 page paper on their election process; citing field trips, interviews, and documents they have studied.

### Business

Students will be evaluated by writing a paper documenting processes used to accomplish the goal and critiquing own personal influence on the project as a whole.

### Biology

Students will be evaluated by lab reports detailing their scientific inquiry.

## **REFERENCES:**

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Elkins, David J. Manipulation and Consent: how voters and leaders manage complexity. UBC Press, Vancouver: 1993.

Sabato, Larry J. Campaigns and Elections: a reader in modern America Glenview, IL,: 1989.

# Up, Up and Away With Rockets

Greg Moehrlin:	Biology/Physical Sciences	Kevin Koeppen:	Industrial Technology
Chad Vance:	Biology/Physical Sciences	Kim Marturiano:	Industrial Technology
Megan Wills:	Business	Mark Warunek:	Business

## Subjects Integrated

Business:	Marketing seats on a futuristic interplanetary commuter shuttle
Physical Science:	How rockets fly, applying physical laws to rocket flight
Industrial Tech:	Auto-cad design, and construction of model rocket

## Objectives

Students will be able to:

- define terms such as marketing, marketing mix, marketing segmentation (knowledge).
- identify parts of a propellant rocket (payload, igniter, casing, propellant, fins, core), and explain the purpose of each (knowledge, comprehension).
- explain three widely used methods of segmenting a market (comprehension)
- explain Newton's Three Laws of Motion (comprehension)
- design two advertisements for a futuristic commuter shuttle appealing to two separate target markets (application)
- calculate the force that a model rocket engine exerts, the height that it reaches, the and maximum velocity reached by the rocket using a model rocket, a stopwatch, and appropriate physics equations (application).
- use auto-cad to design a model rocket (application)
- analyze two advertisements, citing two ways in which the marketer appeals to the segmented market in each ad (analysis).
- analyze two rocket designs and cite advantages and disadvantages to each (analysis).
- create a model rocket (using appropriate materials purchased from a hobby store) that flies successfully, and is recovered successfully (synthesis).
- create a chart showing similarities and differences between two target markets of potential future interplanetary commuters in reference to their needs and wants (synthesis).
- evaluate the flight of the rocket, how the design could possibly be improved, and how the addition or reduction of engine power would affect the next flight (evaluation).

## Rationale

Space travel is an exciting subject that is likely to engage the interests of even unmotivated students. This unit allows students to learn different aspects of rocketry

through a hands-on discovery oriented curriculum. They will learn computer skills including Auto-cad, Powerpoint, and Adobe Paintbrush. Students are challenged to design a model rocket using auto-cad, construct the rocket using appropriate materials (these materials are readily available at hobby stores), and fly the rocket (Industrial Technology). Students will learn how rocket flight is possible within the physical laws of the universe. Concepts will be applied to determine how high the rocket flew, how much force was applied from the model engine, and how fast the rocket went (Physical Science). Future possibilities of a space-travel commuter market could open new business opportunities. Students' creativity will be enhanced as they design a marketing strategy for this new commuter-shuttle (Marketing).

## Resources

Computer applications: Internet access, Adobe Paintshop, Microsoft Powerpoint, color printer

Texts: Physics text, Business/Marketing text, rocketry resource (Rockets, A teaching guide for an elementary science unit on rocketry, NASA, May 1992, (reprint))

Miscellaneous: model rocket parts and engines(students may be asked to provide), stopwatches, balloons, string, straws, magazines

## Unit Description

The unit is very student activity based. Students will have a group to work with throughout the whole unit. Each day there is a substantial learning activity. The first three days also include some needed content. The final two days include an exciting rocket launch, and a presentation of a marketing strategy.

### Day 1: Introduction to Rocketry

- history of rockets from ancient China to present, future (Industrial Tech.)
- physics of rocketry, Newton's Laws of Motion (Physics)
- balloon activity (described in activity section)

### Day 2: Designing a Rocket

- rocket design, parts of a rocket, importance of fins for stability
- obtaining resources, using autocad
- autocad activity (see activity section)

### Day 3: Introduction to Marketing

- marketing strategies, identification of target group
- analyzing magazine advertisements
- designing an advertisement activity (see activity section)

### Day 4: Group work

- rocket assembly activity (see activity section)

### Day 5: Group work

- marketing strategy activity (see activity section)

Day 6: Evaluation

-rocket launching activity (see activity section)

Day 7: Evaluation

-marketing strategy presentation (see activity section)

Day 8: Evaluation

-short answer/essay test

### **Activity Description**

**Balloon Activity:** Students will be broken into groups of 4. These groups will be used for the whole unit. Students will be provided with a several straws, tape, a balloon, and some string. Their objective will be to design a self propelled system that will move an object from the floor to the ceiling. One way to solve the problem would be to tape the balloon to the straw, and have the string go through the straw from the floor to the ceiling (taped). If the balloon is inflated at the bottom with the mouth towards the ground then the balloon will proceed to carry the straw to the ceiling. After students solve the problem Newton's Laws of Motion should be related to the problem, concentrating on the third law "For every action there is an equal and opposite reaction"

**Autocad Activity:** Student groups will be instructed in the basics of autocad, its applications and uses. Rocket design will be assigned and explained. Students will be advised how to obtain materials.

**Designing an Advertisement Activity:** Student groups will be instructed in the basics of using computer graphics programs including Powerpoint and Adobe Paintbrush. Marketing assignment of commuter shuttle will be explained.

**Rocket Assembly Activity:** Student groups will assemble the rockets that they will be launching. All students in group should be involved. Rockets should be decorated, and ready for flight.

**Marketing Strategy Activity:** Student groups will put together a marketing strategy including two one-page color advertisements targeted at different groups, and chart differences between two target groups. The product marketed will be a futuristic commuter shuttle to different planets. Customers will be targeted.

**Rocket Launching Activity:** Students will launch rockets and successfully recover them. Each group will be responsible for calculating maximum height, maximum velocity, and force applied by the engine. This can be accomplished using a stopwatch. The time to the engine stops firing, and the time to the maximum height is reached needs to be known. Also the mass of the rocket needs to be known. Since the acceleration due to gravity is known ( $-9.8 \text{ m/s squared}$ ), the answers can be calculated using physics equations.

**Marketing Strategy Presentation:** Each group will give a brief (3-4 minute) presentaion of their marketing strategy. A one-page advertisemnet, a target group identification, and a target group difference chart needs to be presented.

### **Evaluation**



The unit will be worth 150 points. The point distribution is as follows:

50 points: Rocket Launching Activity

-20 points successful launch and recovery

-5 points successful calculation of height

-5 points successful calculation of force

-5 points successful calculation of velocity

-15 points write-up describing how rocket was constructed, what could be improved, and what shouldn't be changed

50 points: Marketing Strategy Presentaion

-20 points presentation skills (eye contact, use of visuals)

-20 points 2 one-page ads

-10 points target group difference chart

50 points: short answer/ essay test

## References

Trinklein, Frederick E. (1990). Modern Physics. Chicago, IL. Holt, Rinehart, and Winston, Inc.

Owens, Bill (1996). [Http://www.nysernet.org/staff.billowens/mars/plumber.html](http://www.nysernet.org/staff.billowens/mars/plumber.html) (website)

Stull, Hutt. (1992). Marketing: An Introduction. Cincinnati, OH. Southwestern Publishing Co.

Vogt, Gregory L. (1992). Rockets: A teaching guide for an elementary science unit on rocketry. National Aeronautics and Space Administration document.



# EXXON VALDEZ

## TEAM MEMBERS

John Goodrum  
Adrian Hale  
Sundown Hardt  
Jenny Schmeichel  
Stephanie Stinebaker

## PROJECT AREA

History  
Biology  
English  
Business  
Business

## Time Frame:

Two Weeks

## Subjects Integrated:

Biology  
Business/Math  
English  
History/Geography

## Objective:

1. The students will be able to identify the people responsible, the geographic location, and the significance of the event.
2. Students will be able to recognize and use charged and emotional words for persuasion in written compositions.
3. Students will be able to describe the effects of the oil spill and the cleanup on South Central Alaska's marine ecosystems.
4. Students will be able to analyze the effects of the oil spill and calculate its impact on the economy.

## Rationale:

The Exxon Valdez oil spill disaster had significant impact on the oil industry, South Central Alaska's marine ecosystems, and the livelihood of the Alaskan nature's population. The results of the disaster can educate students as to the effects of human interaction with the environment for positive and negative.

## Unit Description:

History: The History portion of this unit will be conducted using a variety of methods. Readings; consisting of maps, primary source news documents, and personal biographies will be stressed to give the student the proper background knowledge that will aid the other curriculum. The use of the Exxon Valdez specification along with the tankers silhouette will be very useful in explaining how this disaster could occur. Students will cover the events that lead up to and responses, in what was a disaster of widespread proportions. As one commentator of the time said, "What the Titanic was to the winter cruise business the Exxon Valdez was to the oil transportation industry."

**Biology:** Students will research through a library activity, which species were affected the most by the oil spill. They will find that killer whales, sea otters, harbor seals, sea birds, and many fish have been permanently harmed through their contact with the 11 million gallons of crude oil that spilled from the tanker. They will also be required to study how the oil may have affected each of these species and determine if the efforts to rehabilitate oil contaminated animals have been successful worth the cost.

**Business:** Students will research through an Internet activity how this event affected the oil industry and economy. They will look at stock prices, oil prices, and gas prices. They will see after the oil spill that stock prices dropped, and oil and gas prices rose.

**English:** Students will read a chapter from Sea Otter Rescue. They will be asked to identify charged and emotional words that give away the author's feelings on the subject or that persuade the audience to buy into that feeling. The use of these words for persuasion will be discussed in class. Students will then write a 3-5 page paper demonstrating the use of charged words in conjunction with an environmental issue.

**Activities:**

**History:** Through lectures, maps, readings, and tanker schematics, students will be able to reproduce in detail the major events of the Exxon Valdez oil spill. They also will identify and locate where this occurred and analyzing the effects to government as well as private institutions. The student will also be given the ground work necessary to understanding the discussions in other subjects.

**Biology:** In a lab setting, students will test the effects of oil in water, on feathers, and on a faux fur. The purpose of this activity will show students how the oil acts in water and how difficult it is to remove the oil from contaminated animals.

**Business:** Looking in the Wall Street Journal and comparing the stock prices of Exxon and other oil companies, the students will draw a graph of stock prices and gas prices. They will write a paragraph analyzing the two graphs.

**English:** Students will, in groups, identify the charged or emotional words in a short chapter. Students will also write a short paper.

**Evaluation:**

**History:** In test format the student will be able to list the main characters and the order in which events occurred. Using a detail map, the student will chart the actual course of the ship in relation to its suspected course. From this students will argue (in a one page essay, citing examples) who was at fault.

**Biology:** Students will be given a quiz over which animals and plants were most affected by the spill.

**Business:** The students will be evaluated on their graphs and the typed paragraph analization.

**English:** Students will be evaluated on the proper use of persuasion in their papers.

**Resources and References:**

Boersma, Dee P. and Parrish, Julia K. "Muddy Waters," American Scientist, March - April, 1995, pp. 112-115.

Church, G.J. "The Big Spill," Time, April 10, 1989, pp. 38-41.

Lemoninck, M.D. "The Two Alaskas," Time, April 17, 1989, pp. 56-59.

Macleod, S. "The Biggest Spill in U.S. History," Time, April 3, 1989, p. 63.

Rand McNally World Map

Raloff, Janet. "Brain Lesions Helps Explain Seal Loss," Science News, February 20, 1993, p. 126.

Raloff, Janet. "Valdez Spill Leaves Lasting Oil Impacts," Science News, February 13, 1993, p. 102.

Smith, Roland C. Sea otter Rescue, Cobble Hills Books a Division of Penguin, New York City, 1990.

Wall Street Journal, March 20 - 31, 1989.

Cut out and copied silhouette of Exxon Valdez

Internet

# One of the Seven Wonders of the World

## An Integrated Study of Pyramids

### NAMES AND MAJORS:

Rhonda Augustiniak; Art  
Robert Fitzgerald; History  
Jami Kehl; Business

Sara Marx; Math  
Nancy Molitor; Business

### SUBJECTS INTEGRATED:

History: The Foundations of Egyptian Pyramids  
Art: Exploration of the relationship between "modern art" and "art of the past."  
Math: Area and Volume of Pyramids  
Business: The Pyramids of Marketing

### OBJECTIVES:

#### *History:*

1. To demonstrate an understanding of the Egyptian civilization and the significance of the pyramids to modern day civilizations.

#### *Art:*

1. With the aid of lecture, slides and research, students will recreate a model of an ancient Egyptian pyramid. They will incorporate the aesthetic qualities of its interior and exterior, while making parallel distinctions and connections to nineteenth century architecture.

#### *Math:*

1. The students will be able to calculate the area and volume of pyramids with three-sided and four-sided bases.
2. Given a designated volume and/or area, the students will be able to construct a model pyramid to fit the given measurements.
3. The students will be able to explain the effects of changing the length of a side on both the area and volume.

#### *Business:*

1. The students will be able to use the Internet to glean information pertinent to Pyramid schemes and multi-level Marketing.
2. The students will demonstrate the ability to decipher a pyramid scheme from given examples.

## **RATIONALE:**

The awesome architectural structures of the Egyptian pyramids stand to represent the human potential. Students will be presented the historical and technological significance of these structures, and what they mean to the development of modern day civilizations. The underlying principles that support these structures are also related to modern day marketing schemes. This integrated view of the pyramids will enable students to better conceptualize their significance to the world.

## **RESOURCES NEEDED:**

### *History:*

Pictures & hand-outs on the different pyramids in Egypt

### *Art:*

foam core, clay, various materials to complete the project

### *Math:*

Three dimensional models of pyramids of various shapes and sizes, pipe cleaners, computer lab and computer software that lets the students draw and manipulate three dimensional pyramids, such as Geometry SketchPad.

### *Business:*

Access to the Internet with parental permission, overheads illustrating the exponential growth of pyramid schemes, General Business textbook, handouts of examples of pyramid schemes.

## **UNIT DESCRIPTION:**

*History:* A background of the foundations of the Egyptian pyramids. Students will discuss the uses of the pyramids in the time in which they were built as well as their significance in today's society. The unit will provide perspective on the religious, political and historical aspects of the structures and the significance of the internal designs and artifacts.

*Art:* Students will research the interior and exterior of an Egyptian pyramid. Their research will include myths, symbols, decoration and (art) history of the pyramids. Students will then construct a pyramid including interior and exterior distinguishing characteristics. Students will select one aspect of the pyramid and make a connection from the past to the present.

**Math:** This section on pyramids will fit near the end of the unit on area and volume of solids. Begin this section two to three days after the introduction of Egyptian history. Introduce the basic structure of pyramids by bringing various three-dimensional models or pictures of various shapes and sizes into class. The first day is the introduction and the calculation of area. The second day concentrates on volume of pyramids. Discuss the different uses of pyramids. Lead into the volume necessary for different uses. The third day, the students will be divided into small groups. Each group is given a description of a use for a pyramid. They will then decide how much area and/or volume they need and construct a scaled model from the pipe cleaners. Address the relation between length of sides and volume. The last day is spent in the computer lab, drawing their models on the computers. They can experiment and see the effect of changing lengths on area and volume.

**Business:** Students will take an interactive approach to understand the underlying principles of how pyramid schemes operate. The unit will examine the authenticity of the ventures, types of schemes, and the legal ramifications of participation. Students will use the Internet to discover sources related to pyramid schemes and to research the topic on a worldwide scope. The course will inform students on methods to protect against falling prey to these schemes and methods to decipher the legality of the ventures. The unit will culminate with discussions on multi-level Marketing and how this activity differs from illegal pyramid schemes.

#### **ACTIVITY DESCRIPTION:**

**History:** Daily activities will include discussions on the significance of the Egyptian pyramids for that time period. Students will research one particular pyramid and determine the religious and political functions as compared to other pyramids of the time. The paper will also provide information regarding the importance of the pyramids in today's civilizations.

**Art:** The students will build a three-dimensional replica out of foam core. The pyramid will consist of at least four levels and incorporate the following: hieroglyphics, tunnels, tombs, wall decoration, mummies, and rooms for monarchs. Another activity will require students to select either a pharaoh, king, or queen of the ancient Egyptian culture and to recreate an Egyptian scene on a flat slab of clay. The students will incorporate specific criteria into their scene and be able to explain to the class the meaning or purpose of the scene.

**Math:** On day three of the pyramid lesson, divide the students into small groups. Before class, with the history teacher, create several possible uses for pyramids and the sizes of pyramids needed. Distribute these uses to the groups. Allow each group to determine the necessary volume/area needed. (Make sure they look for these measurements first.) Have them use ratios to scale down their model and build this skeleton model out of pipe cleaners. Calculate volume and area to check work.

**Business:** Students will use their knowledge of the Internet and provided addresses to research and identify pyramid schemes on the information highway. Information from the sites will be presented to other class members through informal presentations.

### **EVALUATION:**

**History:** Students will be evaluated on class participation and the research paper.

**Art:** The assigned three-dimensional pyramid replica and the recreation of an Egyptian scene will be evaluated on the incorporation of the given criteria.

**Math:** Students will be evaluated through homework, the pyramid project and a short in-class worksheet which is completed before and after using the computers.

**Business:** Students will be evaluated on class participation, informal class presentations, and quizzes over the material covered within class.

### **REFERENCES:**

Dr. Roger Day (personal communication, September 26, 1996)

Egyptomania. (1994). National Gallery of Canada, Ottawa.

Humphrey III, Hubert. (1995). Pyramid Schemes. [On-line serial]  
Available Internet: [www.ag.state.mn.us/consumer/fraud/pyramid.html](http://www.ag.state.mn.us/consumer/fraud/pyramid.html).

## **Building Bridges**

**Title:** Integrated Home Building Project

**Names and Majors:** Tiara Bedenko: Business  
Dan Rohman: Industrial Technology  
Matthew Swedko: Industrial Technology

### **Subjects Integrated:**

**Business:** Learn to analyze and implement the planning and budgeting processes, and utilize problem-solving skills.

**Industrial Technology:** Learn how technology can be used to incorporate real-life planning, and how it can affect us every day.

**Social Science:** The effects demographics have on family planning and on our personal housing project.

**English:** Students will evaluate what they have learned, and write a paper to communicate their findings to each other.

**Time Frame:** Four weeks

### **Objectives:**

- ◆ Students will acquire a basic understanding of the planning and budgeting processes.
- ◆ Students will be able to demonstrate their Computer Aided Design (CAD) skills.
- ◆ Students will learn the important role demographics play in their lives, and learn the importance of good social skills.
- ◆ Students will learn the value of good communication skills, both oral and written.
- ◆ Students will analyze and solve real-life problems that occur when building a home.

**Rationale:** Planning and building a home will help the students realize the duties and adult responsibilities that they will someday face. This unit will provide students with the skills they need to research, plan, budget, and implement their ideas for the future. The integration of this material is important because it gives students a realistic view of the complicated problems and work it takes to prepare a home building project. Moreover, the students will also learn the satisfaction of accomplishment and hard work.



**Unit Description:** Our home building project will provide students with a better understanding of the significant factors that are dealt with when planning to build a home. This is something that all students may realistically face in the future. It also provides a good look at the different disciplines needed to make the project a success.

In **Business** the students will use critical thinking to implement a planning process to design their home. They will each need a detailed plan before they begin to use the Computer Aided Design. They will also need to budget the costs of supplies that they will need to build their home. Accounting skills will be necessary to keep individual account records that they might require if they were to purchase supplies on account.

In **Industrial Technology** the students will learn to use Computer Aided Design (CAD). They will familiarize themselves with the different drafting tools, which will aid in designing their home. In addition, the students will be introduced to the different types of contractors that can be used, the different assortment of supplies needed, and the necessary permits they will need to acquire in order to build.

In **Social Science** the students will get a clear picture of the importance of demographics will play in choosing where to build their home. The size of the town, how close the building site is to local schools, and what kind of transportation is available and needed. These are all key factors in planning where to build. The towns norms, cultural diversity, and ideals should all be considered before a spot or town is chosen.

In **English** the students will be able to utilize their communication skills by writing a paper revealing their findings. They will also be asked to evaluate what they might have changed in the original plan if they could do it over. In the paper they should also include whether or not they thought their project was a success and tell why.

### **Evaluation:**

In **Business** the students will be graded on the accuracy, neatness, and creativity of their draft plan. They will also be required to turn in their detailed budgets and any accounts set-up for a grade.

In **Industrial Technology** the students will be graded on how well they learned to utilize CAD operations, and how their final home draft turned out. Was it to scale? Was it creative and neat?

In **Social Sciences** the students will be asked to write a paper about the town they chose to build their house in. They will be asked to list important factors (transportation, size of community, schools near by, and churches). The paper should also explain how each of these factors affected their decision.

In **English** the students will be graded on a paper evaluating their personal experiences with the project. This paper should include how well they felt they followed directions, and how well their project turned out. They will also be graded on a 10-15 minute presentation showing their design to the whole class. They should include in the presentation their reasons for choosing the design they did, the reason they chose the town they did, and if their planning process was a success.

## **The Integrated Curriculum of Company B**

### **Names and Majors**

Renee Bilyeu: English Education  
Jeff Lydecker: English Education and Economics  
Brian Brooks: Business Education  
Tracy Blakemore: Biology Education  
Stacey Shrewsbury: History Education

### **Subjects Integrated**

History: The Events Before and During WWII  
Home Economics: WWII Fashion  
Biology: Scientific Discoveries of the WWII Era  
English: The Processes of Writing and Editing  
Fine Arts: Music of WWII Era (Music Classes)  
                    Scenery Making (Art Classes)  
Speech: Persuasive Speaking-Styles and Techniques of WWII Leaders  
Math: Geometry as it Relates to WWII  
Business: Advertising and Funding-Supporting a WWII newspaper  
Industrial Technology: Utilizing Graphics with Computers (Graphic Design Classes)  
                                    Constructing Sets for Plays (Woods and Design Classes)

### **Objectives**

Students will gain an understanding of the events and impacts of WWII from a number of different disciplines and use this knowledge to produce a newspaper from the time period. They will be taking ownership of their particular project by determining the view point of their newspaper, its layout and design, and the information to be included (within strict guidelines). The students will also learn to work collaboratively and to use computer programs that will be extremely relevant to their present and future lives.

### **Rationale**

The rationale behind this project is that the students creativity will blossom by allowing them freedom to pursue their own interests and providing them with knowledge relevant to their own situations. We believe that if students are given the chance to pursue their own interests, the results will be improved reading and writing ability, enhanced knowledge with different subject areas, increased familiarity with computer programs relevant to the students' lives, and more pride in their work. Because historical knowledge can help the students better understand their world, we have chosen the topic of WWII due to the fact that the effects of the war are still relevant today.

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## Resources Needed

Outside of the regular text books, we will need computer software such as Corel Draw, Page Maker, Word, WordPerfect, Excel, Lotus 1-2-3, and/or Netscape, tools for set construction, and an outside theater troop.

## Unit Description

This will be a six week unit culminating into a newspaper designed by the students from the information learned throughout the six weeks. There will also be a corresponding USO Variety Show which will be enacted during the final week of the unit. Student teams will design their newspapers and determine the content within them. Each discipline will provide subject matter relating to design, content, and/or funding of the paper.

*History:* Students will be able to write a newspaper article discussing the causes of WWII, U.S. involvement in the war in Europe, and life in the United States. All works written for the newspaper will be edited by the English Department. Students will work collaboratively with both the science and speech departments to research discoveries during the WWII era and political speakers and their speeches respectively. Students will also be given the opportunity to attend the USO Show for which an extra credit paper may be written.

*Home Economics:* Students will study fashion of the WWII time period and design the costumes for the USO Show.

*Biology:* Students will explore the numerous scientific discoveries of the WWII era and their impact on society both then and now. Each team will choose a discovery to focus on and, in cooperation with the English and Speech Department, prepare a research paper to be presented to all students. Finally, the teams will take a look at the development of the atomic bomb and conclude with an interdisciplinary workshop on the bio-ethics of chemical and biological warfare.

*English:* This discipline will provide a lot of supporting work in the efforts toward the final newspaper. It will aid in the writing of papers in the other disciplines and in the editing of newspaper submissions. It will also focus on the literature written during the WWII era such as A Farewell to Arms, Night Mother, and excerpts from The Diary of Anne Frank. After studying these pieces, students will incorporate their knowledge into the newspaper through book reviews, editorials, letters home from the war front, etc.

*Fine Arts:* Music students will demonstrate knowledge of WWII musical pieces by preparing and playing musical accompaniment for the USO Show. Art students will demonstrate their own understanding of WWII by designing and creating the props/scenery appropriate for the show.

*Speech:* Students will study persuasive speaking by analyzing the styles and techniques of WWII leaders. They will put these techniques into practice through writing and giving individual and group presentations.

*Business:* Students will utilize knowledge of advertising principals and funding to create the layout and advertising selections for the paper. Students will obtain WWII propaganda from the Internet by using Netscape. They will also research

their "audience" by studying actual newspapers from the time period available at the library.

*Math and Industrial Technology:* Students in these two departments will act jointly to construct the set for the USO Show at the least possible cost. All measurements, calculations, and design considerations will be handled by these two departments for both the USO Show and the graphic development of the newspaper.

## Activities

Regular classroom assignments will be done away with and the students will be broken into groups of 6 or 7 students called "teams." Members can be from any classroom participating in the unit. Once in a team, that group will function as a whole for the rest of the unit and only be broken up for special seminar days. Daily activities and schedules will vary depending on which disciplines are working together that day.

The unit will begin with an introductory assembly where excerpts from WWII leaders' speeches will be reenacted by an outside theater group. Throughout the day, these actors will roam the halls and classrooms depicting persona from different parts of the war. Students will also be broken into their groups at this first assembly.

Once a week there will be a Seminar Day where faculty members will each lead their own seminar. Students will have a choice as to which seminars they will attend. Student teams will be required to have every member of the team attend one seminar different from other members of the team. The team members will then be given a period after the seminars to "teach" the other team members what he or she learned. Topics of some of these seminars are Further Discoveries from the War (Biology), Taking Graphics from the Web (English), Biographies on WWII Leaders (History), etc.

There will also be a USO Show which will run along side of and in conjunction with the unit. It will be a variety show in which students will present their own special talents in a WWII theme. Though student participation is voluntary and there is no grade associated with participating in the show, the Fine Arts, Music, and Industrial Technology departments will have curriculum associated with the show's implementation through set construction and music. The Home Economics department will also participate by providing the costumes and food for the show.

The newspapers themselves will be designed by the teams. Each of the teams will be given a country. Each is then to determine a view point from which they will write the paper (for, against, or neutral to their particular country). Each of the papers will have to be written as if it is coming from the country which the teams are assigned. For example, if the students were given Germany and they decide to write a newspaper against what their country is doing, they cannot write it like they would a Chicago Tribune. It would have to be some kind of an "underground" newspaper for Hitler would not have allowed such material to be printed within his country. The material within the paper will come from the different classes throughout the unit.

Students will also take field trips to a WWII artifact museum and a newspaper publishing center as further learning opportunities.

## **Evaluation**

Each of the disciplines will have supplementary assignments, projects, and/or tests which will take place throughout the unit. The newspaper, however, will be the largest chunk of the grade and will be graded by all of the disciplines who contributed to its creation. When submitted, the newspaper will be examined by a faculty member from each discipline who will grade it according to its own specific criteria. Therefore, a paper will have a Biology component grade, an English component grade, a History component grade, etc. This will become the "Newspaper" portion of the students' grade for each of the particular disciplines.

## Decision '96: The Integrated Political Party Unit

### Names and Majors:

Jeff Kintz : Business  
Jodie Schlipf: English

Marta Mason: Biology  
Ryan Short: Social Science

### Subjects Integrated:

Art: Develop Creative Posters, Buttons, and Advertising Materials

Business: Financial Records, Gathering and Distributing Funds, and Using Desktop Publishing

English: Understanding, Analyzing, and Writing on Party Politics and Literature

Industrial Technology: Construct Voting Booths and Convention Materials, i.e. podiums.

Music: Apply Patriotic Music to Political Campaigns

Science: Research Bioethical and Health Related Issues within the Political Realm

Social Science: Examine the History and Ideology of Political Parties

Speech: Analyzing, Preparing, and Delivering a Political Speech

### Objectives:

Students will

- (a) display effective teamwork and communication skills by creating and participating in a political party;
- (b) demonstrate an understanding of civic responsibility by developing and participating in a mock election; and
- (c) evaluate the election/campaign process through classroom assignments, research rationales, reflective writing and journalizing on the political party process.

### Rationale:

Informed political decision making for the future voting citizens of the United States is critical for the welfare of our country. Through a unit detailing political parties and the election process, students will be introduced to a vast amount of information that they can apply to make these informed political decisions. Through curriculum integration students will learn effective written and oral communication skills. In addition, students will gain critical and analytical abilities essential for a successful mock election and future employment opportunities.

### Resources and Materials Needed:

Resources include various businesses and school personal that are will to participate in "funding" campaigns and election expenses. Also, resources include various library materials such as reference books, periodicals, and research access.

Materials should include components to build debate and convention equipment, sound equipment, art supplies for posters, buttons, pamphlets, etc. . . , and sheet and audio music.

### Unit Description:

The purpose of this integrated unit is to invoke civic responsibility into students' lives. Through this unit, we hope to have students learn to see themselves as citizens of the United States, a part of a larger community, and that it is their civic duty to participate and actively vote or

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voice their ideas and decisions in this community. Another purpose for this unit is have the students learn to work actively and efficiently in a group environment and focus on their decision making skills, interpersonal communication skills, and small group communication skills.

**Art:** The students will work with the business education department and desktop publishing to prepare campaign advertising materials including posters, buttons, flyers, pamphlets, banners, etc. . .

**Business:** The students will research the basics of finance as it relates to their campaigns. The students will also keep detailed financial records on the receiving and disbursement of funds. They will also solicit funds and purchase materials for their campaign. The students will also research the financial issues involved in the campaign including taxes, government funding, etc. . . , and they will discuss the various sides to draw their own conclusions on how to approach these issues. The students will also learn about campaign advertising and use desktop publishing to create campaign advertisements and materials.

**English:** The students will read various political writings spanning from the beginning of our country to current literature and learn how to analyze and interpret these writings. Reflective, persuasive, and informative writing will be focused on in conjunction with keeping a journal on party decisions and activities.

**Industrial Technology:** The students will learn how to construct various campaign equipment and materials. The student will then be asked to design stages, podiums, sound equipment packages, and other convention and election materials using their design and geometric skills.

**Music:** The students will learn various political tunes and musical movements that can help to inspire and create a victorious atmosphere for the campaign.

**Science:** The students will research all sides of health and medical issues prevalent in today's political realm including environmental and ecological concerns, health care, welfare, medicare, abortion, DNA engineering, bioethics, smoking, etc. . . Unbiased findings will be presented in class, and students will also be asked to analyze the issues through class and group discussion and draw their own conclusions on how to deal with these issues in their own campaign.

**Speech:** The students will learn how to develop and improve their public speaking skills. They will learn how to research, organize, write, and deliver a speech. They will also learn how to analyze a speech, the art of persuasion, and how to give a political debate.

**Social Sciences:** The students will learn about various aspects of the United States Presidency, the history of elections, and the development of political parties. The students will learn how to analyze past elections and compare and contrast these elections to modern campaigns. The students will also conduct surveys, such as straw polls and exit polls, to gauge the candidates' positions throughout the campaign. The unit will include having students complete demographic studies to determine major issues and voting habits of the general population.

### **Activities:**

The students of the eleventh grade will be divided into three political parties. The parties, having learned about the necessary information and tasks of an election campaign and current issues, will then choose their own name and issues on which they base their campaign. They will also choose their own candidate, who chooses his or her own running-mate, and organize the remaining students into groups that are to complete jobs such as speech writers, solicitors and fund



collectors, financial advisors, calendar planners, pollsters, advertisement committee, etc. . . All students must participate and become involved in the party in which they are placed. Fake money will be collected to "purchase" supplies, and these pseudo-funds will also go towards advertising seconds on the morning announcements for campaign purposes and other similar expenses. After five weeks of classroom and group meetings, the candidates will come together in front of the entire school and community (if possible) to debate the issues of the election. Major issues for the debates will be selected by a cooperating teacher with respect to the issues chosen by each party. The following week, an all school election will be held to decide the "presidential" winner.

#### Evaluation:

In general, the three parties will be asked to compile a portfolio of financial records, speeches given, issues commented on, advertising materials created, and other group work completed for the party. Also party activities will be evaluated such as group cooperation, debate, and success of campaign. Most importantly, at the end of the unit, there will be a WINNER of the election that represents a successful campaign and unit.

Art: The projects will be evaluated on neatness, creativity, and theme.

Business: The students will produce financial and accounting documents and records. The advertising material will also be evaluated on creativity and purpose.

English: The students will produce a journal detailing party decisions and activities and a portfolio of classroom writings. These will be evaluated on depth of reflection and understanding.

Industrial Technology: The students will be evaluated on the construction and purpose of equipment created and be able to explain how each material was created and why.

The students will also be asked on what sound equipment to use, how to use it, and why.

Science: The students will defend their positions on given issues in a three to four page paper and cite examples supporting their positions.

Speech: The students will be required to give a persuasive speech and write a three page paper analyzing a major political speech studied in class.

Social Science: The students will be required to take a multiple choice test on the United States Presidency and election process, conduct a demographic study about student population in school, and write a two page paper comparing at least two presidential campaigns from different bi-decade periods.

#### References:

\*periodicals and newspapers

\* historical political speeches by such people as George Washington, Benjamin Franklin, Abraham Lincoln, Susan B. Anthony, Franklin D. Roosevelt, Martin Luther King, Jr., John F. Kennedy, etc. . . and current political speeches

Edwards, George C. III and Wayne, Stephen J. (1994) Presidential Leader: Politics and Policy Making. New York: St. Martins Press.

# INTERCREATIVE DESIGN

## NAMES AND MAJORS

Kelly Podzimek	Industrial Technology	Ismael Zamora	Math Education
Dawn Vavrik	English Education	Jeff Mueller	Industrial Technology
Rachael Rone	Business Education	Barry Gilstrap	Business Education
Michael Cichu	Social Science Education	Kristen Algrim	Biology Education

## SUBJECTS INTEGRATED

**Industrial Technology:** The Utilization of Current Technology to Develop a Product

**Biology:** Ecology and Economics - Finding the Balance

**English:** Using Oral and Written Communication for Persuasion and Profits

**Mathematics:** Profits and Losses - The Mathematics of Business

**Business:** Supply and Demand - How to Market Products Effectively

**History:** entrepreneurial Success - How to Make it Big

## OBJECTIVES

By the end of the unit the student should be able to perform the following:

- Develop a Real or Imaginary Product, Include a List of Materials
- Work in Teams to Solve Manufacturing Problems
- Hold Positions of Authority (President, Vice President, etc.)
- Explain Social and Environmental Impact of Developed Product
- Chronologically List Steps to Complete Design
- Discuss Economic Feasibility of Product
- To Conduct a Survey Research Team
- Produce a Written Rationale for a Product
- Develop a Marketing Strategy and Logo
- Develop Prototype
- Produce Commercial
- Orally Present Product Design and Marketing Strategy
- Market your Product for a Profit

## RATIONALE

The design, creation, and marketing of a product is not as easy as some may believe. There are many procedures incorporated in the process. Process, is the key word. There are many processes involved such as, determining the target population and the right environment in which to sell the product. Will the product sell here? How is the capital raised to start a project? These questions can be resolved easy by working in a team. Each team member will contribute skills which they have mastered. Completing this project will give students experience with team work, an understanding of the manufacturing process and make students more knowledgeable consumers.

## **RESOURCES NEEDED**

- **Computer Equipment** - AutoCad 13, Power Point, Word Processing, Microsoft Word, Internet Access, Calculator
- **Video Equipment** - TV, VCR, Camcorder, Tapes, Photocopier
- **Packets** - Individual Content Area needs
- **Materials** - Needed Upon Decision of Product

## **UNIT DESCRIPTION**

This unit is titled "Intercreative Design." The theme will be taught in individual content areas and in a special class called Homebase. Students will work in groups of six. A brief overview of how the curriculum is integrated is presented here. Working through the curriculum, students will produce their final product.

### **SCIENCE**

Students will examine the material from which many products are made. These products will be broken down into raw materials. Students will then determine where these materials are obtained and how they are obtained. The examination of environmental impacts will be closely examined. Students will look at how the search for raw materials has impacted plant and animal life and the environment. They will become familiar with efforts to protect the environment and prevent further destruction. Students will examine the ways industry and the government are attempting to protect the environment. Students will explore the most effective ways to get materials while limiting the amount of damage to the environment. The unit will relate to industrial technology because the results of their environmental studies will impact the design of their products. It will also connect to business by examining how businesses currently handle these problems. Lastly, it will relate to Mathematics because they will use Mathematics to complete their labs.

### **INDUSTRIAL TECHNOLOGY**

Manufacturing entails the process of designing detailed drawings of the product. In Industrial Technology the students will use both hand-drawings and computers to produce sketches of their product. Students will also study the concepts behind production line manufacturing. This unit will tie into business and Social Science by comparing past product ideas to the ideas the students have developed.

### **SOCIAL SCIENCE**

The success and failures of famous entrepreneurs will be the focus of Social Science. Students will determine how and why an inventor or entrepreneur became famous. This study will assist the student's progression through their product's design. By examining entrepreneurs of the past, students will be able to compare and contrast their creativity to successful inventors. Students will see specific examples of creative ideas/inventors and how they worked for others in the past. This unit does not just focus on the history of entrepreneurs, but also deals with the social aspects of product design. The unit is integrated very well with the other contents and the majority of the lectures, materials and activities will combine all of our team teaching units on product design. It will tie in with Science by examining the ecological problems other investors had to deal with. It will integrate with Business by examining how the raised capital and their use of marketing to sell products.

### **MATHEMATICS**

Students will compute the dimensions of their product and packaging, calculate the cost of production, and determine a reasonable price for the product. Students will learn to utilize algebraic and geometric skills. They will have to perform break even analysis in order to

determine their price. This will require them to determine and estimate the costs that they will incur. This will provide the connection to Business and Industrial Technology to estimate these prices, based upon the experiences of other companies and the research of the groups. Students will also determine the percent of profit/loss, supply and demand graphs.

### **ENGLISH**

In English, students will explore promotions and advertising. Students will analyze television commercials and determine whether or not a given commercial is effective; then, they will produce and star in their own commercial. Students will also practice writing business letters arguing for the production and sale of their product. The English unit is integrated with all of the content areas because of the focus on written and oral communication

### **BUSINESS**

Students will spend time learning the basics of marketing by examining the marketing mix and the development of market surveys. The history unit about entrepreneurs will be used to develop ideas and strategies. After deciding upon a product, each group will develop a marketing plan. This marketing plan will be used to develop the commercial in the English class. The price of the product will be determined by applying the economic principles that are being taught in the Mathematics class.

### **HOMEBASE**

In daily Homebase, students will meet with their business partners and with a teacher/advisor who will give individual attention to one group per day and one day a week is a designated work period.

### **ACTIVITY DESCRIPTION**

The prototypes and commercials will be presented in a product fair open to parent and community members, as well as peers.

### **SCIENCE**

- Laboratory exercise to examine different materials
- Field trip to local company to watch them make a product (this can be done in conjunction with other classes)
- Research and examine the steps that businesses take to help preserve the environment.
- Use the Internet to find information related to the environment and the materials they intend to use.
- Students will do a presentation on how their product is environmentally

### **INDUSTRIAL TECHNOLOGY**

- Students will use CAD to develop a prototype of their product
- Students will also examine the best materials to use to produce their product based upon environmental impacts, performance and cost

### **SOCIAL SCIENCE**

- Students will receive case studies/articles on famous entrepreneurs.  
They will compare and contrast these inventors and how they became a success.

- Students will examine how their product can help others and some of the ways why inventions are good for society. Students will learn and review various environmental laws and standards which their product must abide by.
- Students will do some worksheets and skill sheets on entrepreneur success and what steps are involved in the process.
- Field trip to The Museum of Science and Industry. Students will see hands on many great inventions of all times.

## **MATHEMATICS**

- Students will, based upon their product, determine the package of the product based upon the concepts of volume and surface area.
- Students will also have to show the pricing strategy for their product
- Charts will be created to show future sales

## **ENGLISH**

- Students will develop a commercial for their product
- Students will present their commercial
- Students will also write business letters

## **BUSINESS**

- Students will develop two surveys to determine possible products
- Students will develop a written marketing plan
- Guest speakers will be used to discuss accounting, law and marketing

## **EVALUATION**

Each area will be evaluated separately. Satisfactory completion of the activities assigned for each unit and meeting the objectives for the unit will receive satisfactory grades. Peer evaluations are required. grades will be assigned in each content area based upon the work put into the project, final product, and each individual content area. Extra effort put forth by students will be recognized and grades will reflect this.

## **SCIENCE**

- 20% presentation (5 minutes)
- 10% Lab write ups and quiz
- 20% Evaluation of field trip
- 20% Homework assignments (Internet, research, worksheets)
- 30% Test over material

Students must earn at least 70% of these points to pass the unit. Extra credit may be assigned

## **INDUSTRIAL TECHNOLOGY**

- Drawings of product by hand and computer
- Analysis of product feasibility
- Homework
- Tests

77

## **SOCIAL SCIENCE**

- Weekly journals of progress

- Report on a famous inventor
- A paper/reflection explaining the social impact and environmental impact of their product.
- Daily Homework, worksheets

## **MATHEMATICS**

- Homework
- Tests
- Charts
- Case studies

## **ENGLISH**

- Homework
- Tests
- Commercials
- Letters

## **BUSINESS**

- 40% Overall project grade including the marketing report
- 20% Peer evaluations done on a weekly basis
- 20% Weekly Quizzes over lecture materials
- 20% Final Test using scenarios to apply the knowledge they used to develop their product

# *Building Bridges Symposium*

*Linking the disciplines During Pre-Service  
Teacher Education*



*Ewing Manor, Corner of Towanda and Emerson*

*October 12, 1995 - 5:30 - 8:00 p.m.*

*Parking is available in the church parking lot across the street*

*Presentation of integrated units of instruction by interdisciplinary  
teams of pre-service teacher education students showcasing student  
developed curriculum integration ideas.*

# Agenda

**Registration** 5:00 - 5:30 P.m.

**Session I Presentations** 5:30 - 6:30 P.m.

*Downstairs Meeting Room*

*"Ancient Wisdom: An Integrated Study of China"*  
Gina Amato, Jeff Hamann, Angela Dreesen, Andrea  
Scarborough, Hovey Williams

*"Brother, Can You Spare a Dime?"*  
Cathy Tabor, Nichole Dawson, Nyla Gash, David Doehler,  
Michael Lorence

*"Creatively Integrating on a Miniature Course of Education"*  
Suzanne Fry, Melissa Rog, Angela Carpenter, John Neubaum,  
Dawn Kukuck

**Dinner:** 6:45 - 7:15 P.m.

*Buffet in Upstairs Dining Room*

**Session II Presentations** 7:15 - 8:15 P.m.

*Downstairs Meeting Room*

*"Puttin' on the Ritz"*  
Shannon Foy, Jim Quirke, Cindy Renaud

*"Shakespearean T.I.E.S. (Theater, Industrial Technology,  
English, Social Sciences) Across the Curriculum"*  
Laura Allan, Brian Allen, Shelby Bach, Tom Papagiannis, Jodi  
Vetter

**Closing Awards Session** 8:15 P.m.

*Downstairs Meeting Room*  
*Presentation Awards*  
*Abstract Awards*



# *Session I*

## *"Ancient Wisdom: An Integrated Study of China"*

*Gina Amato, Jeff Hamann, Angela Dreesen, Andrea Scarbrough, Hovey Williams*

## *"Brother, Can You Spare a Dime?"*

*Cathy Tabor, Nichole Dawson, Nyla Gash, David Doehler, Michael Lorence*

## *"Creatively Integrating on a Miniature Course of Education"*

*Suzanne Fry, Melissa Rog, Angela Carpenter, John Neubaum, Dawn Kukuck*

## ANCIENT WISDOM: AN INTEGRATED STUDY OF CHINA

TEAM MEMBERS	DEPARTMENT	PROJECT AREA
Gina Amato	History	Social Studies
Jeff Hamann	Mathematics	Mathematics
Angela Dreesen	History	Social Studies
Andrea Scarbrough	English	English
Hovey Williams	English	English

**RATIONALE:** China has had an important impact in shaping all of the civilizations of the world. Through an overview of its political systems, culture, numerical systems, literature and symbol systems, students will recognize the importance of learning about other cultures. Integrating the curriculum areas will help students have a holistic experience of China and avoid the fragmentation that students often endure in our learning environments.

**RESOURCES:** Books, newspapers, handouts, library resources, pictures, slides, brochure materials, presentations by Chinese Americans and several abacuses.

**OBJECTIVES:** In each of the following subjects, the students will be able to . . .

### **Social Studies:**

gain a broader understanding of China through lectures, slides, extra readings, maps and other primary resources. They will focus primarily on the broad cultural, political and historical aspects of this country but will pay special attention to the communist government of China and the ways in which it controls the personal lives of all Chinese citizens. Major historical events that link the past to the present will be included.

### **English:**

write a 3-5 page paper exploring the influence that ancient Chinese philosophical literature has had on current American ideology. Students will also examine the uniqueness of the Chinese symbol system which is comprised of over 10,000 symbols each having its own distinct meaning. Lastly, students will be responsible for defining in writing at least three of the differences between the Chinese and English languages.

### **Mathematics:**

calculate the value of Chinese currency to and from the US dollar, given a specific foreign exchange rate, to learn how to be a consumer in another country. Additionally, students will learn the history of the abacus, will experiment with the abacus and will identify some similarities and differences between the abacus and the mathematics familiar to students today.

### **DETAILED DESCRIPTION OF UNIT:**

The Chinese civilization, in its thousands of years of development, has influenced the world with its contributions, which include a counting system, philosophical ideals, history, culture and its violations of human rights. We will ask students to utilize a wide array of resources in order to personally answer the question: "How has China affected me as an American?" We will provide the opportunity for students to access this information by building the unit in each subject area on this question.

In the **Social Studies** unit, we will provide students with a general overview of the culture and history of China. This will be accomplished through the use of lectures, slides, extra readings, maps, guest speakers and other primary resources. The specific subjects on which we will focus are the communist government, limits to citizen's rights and freedoms as a result of

that government, and the events that surround those limits such as the rebellion in Tianamen Square and the highly publicized Women's Conference of 1995. Students will learn how events like these, while they occurred an ocean away from us, affect us and the rest of humanity. They will accomplish this by reading, discussing and commenting on journal and newspaper articles written by political scientists and human rights advocates who argue that China should conform to international human rights policies.

In the English unit, students will discuss major themes in Chinese philosophical texts by exploring the philosophies of Lao Tzu in his book Tao Teh Ching and Confucious. In a 3-5 page paper, students will explore ways that these philosophies have affected American ideology and thought. Additionally, students will study the differences between the English and Chinese language by defining in writing at least three differences between the Chinese and English languages, by identifying the symbols for some common American words and by creating or finding symbols for their own names. We will invite a local Chinese symbol systems "expert" to assist students in choosing a symbol name. Our guest will explain the process of choosing symbols for names in Chinese and will give examples of the connotations some of the combinations might have for someone in China. They will create a name tag with their Chinese name on it which they will paste on the cover of a portfolio which will hold all work completed in this unit.

The Mathematics portion of the integrated unit will include a brief introduction to the "Chinese Calculator," better known as the abacus. Students will learn how the abacus works in general, will learn some historical facts about this ancient form of counting and will experiment with the abacus to discover some similarities between the abacus and a modern-day-calculator. To accomplish this, students will break up into two teams and compete to see which team can complete math problems faster using only the abacus as a tool. In addition, students will learn about the foreign exchange rate as it relates directly to our two economies. Students will learn how to use the exchange rates by converting the value of Chinese currency to and from US dollars. Students will be given items to "shop" for and will be expected to add up their total in Chinese funds and then calculate the amount of money they will owe in American funds. Included with the study of the exchange rate, students will briefly learn how historical trends of exchange rates, especially between the US and China affect consumers throughout the world economy.

#### **ACTIVITY AND EVALUATION**

Students will be evaluated on writing assignments, exams and participation in each individual content area. These grades will constitute 60% of the final grade. Additionally, students in all subject areas will design brochures incorporating all subject areas. The purpose for creating these brochures is to give students the opportunity to summarize their knowledge of China while being specific enough so that an outsider might gain a new insight through its use. The brochures will be designed by groups of no more than 4 students who will be evaluated primarily on how well they follow the established criteria and secondarily on the user-friendliness ( i.e.; is it aesthetically pleasing to look at, is it easy to follow, etc) of the brochures. The primary criteria for evaluating these brochures are (1) brochures must incorporate all subject areas, (2) brochures must include pictures, photos, drawings and/or graphs, and (3) brochures must include one section of original information which can be gathered from any of the variety of resources available to the students. For example, a group might decide to include information about biking on the Great Wall of China after looking through a travel guide for China. The brochures represent the remaining 40% of the final grade.

## REFERENCES

Crook, Welton Joseph, Abacus Arithmetic: How to Perform Some Calculations on the Chinese

Abacus. Palo Alto: Pacific Books, 1958.

Henry Kiernan, "The Lessons of Teaching about Tianamen Square," New York Education Digest

April. 1992: 51-53.

Tzu, Lao The Complete Works of Lao Tzu: Tao Teh Ching and Hua Hu Ching Santa Monica: SevenStar

Communications Group, 1993.

The Analects of Confucious, trans. Arthur Waley. New York: Vintage Books, 1989.

## **"Brother, Can You Spare a Dime?"**

### **Names and Majors:**

Cathy Tabor: Business  
Nichole Dawson: Math  
Nyla Gash: English  
David Doehler: English  
Michael Lorence: Social Science

### **Subjects Integrated:**

**Basic Business/Accounting:** The Stock Market Crash of 1929 and its Affect on Businesses.  
**Math:** Graphical Representation of the Stock Market Crash and its Affect on the Economy.  
**Consumer Education:** Standards of Living Comparison Between the Depression Era and the Present.  
**American Literature:** Examination of Conditions During the Great Depression Through Literature.  
**American History:** "Happy Days are Here Again!"

**Rationale:** Integrating the curriculum in this area shows students how to make the connection between the different disciplines. Students will learn that a variety of disciplines are interrelated in every human experience. Showing students how the Stock Market Crash of 1929 becomes interwoven in the lives of everyday people throughout the depression, will give the students a view of the past. By understanding the past, we can comprehend the present and speculate on the future.

### **Objectives:**

**Basic Business/Accounting:** The students will demonstrate, under test conditions, an understanding of business types, the stock market (both past and present), and the ability to read stock and bond tables.  
**Math:** The students will be able to distinguish between different kinds of graphs and charts. The students will demonstrate their ability to analyze data, under test conditions, and make different graphs and charts from given data.  
**Consumer Education:** Students will be able to create a personal budget and demonstrate an understanding of standards of living by writing a short essay comparing the differences between the standard of living during the depression and the present.  
**American Literature:** Students will demonstrate, in writing an understanding of hardships endured by American families during the Great Depression as depicted in selected literary works.  
**American History:** Given a list of New Deal policies, students will be able to identify which programs were to provide relief, which were to provide recovery, and how specific policies, such as the WPA, affected Americans after the New Deal.

**Resources Needed:** Guest speakers, overhead transparencies, graphing paper, pricing data from the Depression era, films, newspapers (*The Wall Street Journal*), various texts, recordings, and audio equipment.

### **Unit Description:**

**Basic Business/Accounting:** In this unit, students will learn about the three types of businesses: sole proprietorships, partnerships, and corporations. By this, they will gain an understanding of the differences between each type of business. The unit also will discuss how firms raise capital, along with how corporations use stocks and bonds. The stock market and the Dow Jones stock and bond reports will be covered, including lessons on how to read stock and bond tables. During the discussion of the stock market, the crash of 1929 will be discussed. We will also incorporate how this event affected businesses from the depression to the present. Activities in this unit will include a field trip to the Chicago Stock Market and a film presentation of the crash of 1929.  
**Math:** In math class, we will examine data related to the stock market crash of 1929 and the Great Depression, including information on the cost of living during this era. We will use this data both to construct and interpret different types of graphs and charts. The math instructor will also present this data in the consumer education budget planning unit.  
**Consumer Education:** Students will study budgets in this unit. The factors that students should include in a budget will be discussed. The students' grandparents will be invited to talk about living conditions during the Depression. Additionally, there will be two activities that allow students to learn how to establish their own budgets. The first activity will require students to record their expenditures over a period of one week. Students will then use those figures to establish a personal budget for the next week. Discussion will take place on how well they "stick" to their budget and what they could do to create a better budget for themselves. In the second activity, students will divided into groups of four

and all but one group will be given different current yearly income amounts with which to create a yearly budget. The other group will be given a Depression income and the price figures developed in the math project, which will be presented to the class by the math instructor, to create a budget. Each group will then make an oral presentation of their findings and provide a written comparison of the standard of living changes due to the income and price differences.

**American Literature:** In this unit, students will evaluate the film, *The Grapes of Wrath*, for its graphic depiction of the Great Depression. Additionally, students will be required to read the novel, *Roll of Thunder, Hear My Cry*, by Mildred Taylor, which reflects life during that same era. Class discussion will compare and contrast the struggles of the family in the film to those of the family in the novel. Selected memoirs from *Hard Times: An Oral History of the Great Depression* will round out the unit, giving students actual accounts of life during the Great Depression. Students will reflect on their perceptions of the Great Depression in their personal journals, which they will maintain throughout the year.

**American History:** In this unit, we will discuss the ideas of President Roosevelt in terms of his New Deal, which took Americans from economic misery to recovery. Students will learn the major points of the New Deal and how those points influenced Americans of the past, present, and future. Students will be asked to identify which programs are still in effect today and why they might be significant to students. Selections of music from the era will be played in class. One small group activity involves giving each group a number that corresponds to a specific New Deal policy, such as WPA or CCC. Each group will then discuss how that policy affected workers' lives, and individually write an essay of no more than two pages about their subject.

**Activity Description:** It is our desire that all classes involved in this unit participate in these activities to gain a full understanding of how the past can display itself in the present and the future.

**Films:** Students will view a film about the crash of the stock market in 1929 to gain an understanding of its historical significance. The students will also view director John Ford's adaptation of *The Grapes of Wrath* by John Steinbeck.

**Field Trip:** Students will participate in a field trip to Chicago's Stock Market where they can view the market in action and visit the stock market's historical museum on the premises.

**Grandparents' Day:** Grandparents will be invited to talk to the students about the Depression and living conditions during that period. A luncheon will be provided.

### **Evaluation:**

**Basic Business/Accounting:** Students will be evaluated through testing at the end of this unit. The testing will include the different types of businesses, the stock market (both past and present), and problems involving stock and bond tables.

**Math:** Students will be evaluated on their ability to distinguish between different types of graphs and charts, and given specific data, to interpret and construct different types of graphs and charts.

**Consumer Education:** Students will be evaluated on their oral presentation of their budget and a short essay comparing the standard of living during the depression and the present.

**American Literature:** Upon completion of the unit, students will be evaluated based on a test consisting of multiple choice, short answer, and essay questions about literature concerning the Great Depression.

**American History:** Students will be given a two-part test. The objective part will cover New Deal policies, while the essay section will ask students to analyze how the New Deal affects American society today.

### **References:**

Bailey, Thomas & Kennedy, David. *The American Pageant*, 9th ed., vol. 2. D. C. Heath & Co., Lexington, MA. 1991.

Bernstein, Jake. *Cycles of Profit* Harper Business, 1991.

Gillespie, Joanne S. "Reliving the Depression: Integrating English and Social Studies." *English Journal*. October 1990, pp. 64-69.

Tindall, George. *America: A Narrative History*, 2nd ed., vol. 2. W. W. Norton & Co., New York, NY. 1988.

*Value of a Dollar, The : 1860 - 1989*. Gale Research Inc., Detroit, MI, 1994.



## **Creatively Integrating on a Miniature Course of Education**

### **NAMES AND MAJORS:**

English: Suzanne Fry, Melissa Rog; Social Sciences: Angela Carpenter, John Neubaum;  
Mathematics: Dawn Kukuck.

### **SUBJECTS INTEGRATED:**

*Social Sciences:* Researching the Demographics of a Potential Business Site, Gathering Information on Construction and Operation of a Miniature Golf Course

*Business:* Preparing a Budget and Assessing Projected Profits

*English:* How to Write Proposals and Using Advertisements to Attract Customers

*Art:* Capturing Public Interest Through Creative Design

*Mathematics:* The Geometry of a Miniature Golf Course, Maximizing Available Resources

*Science:* Determining Appropriate Building Materials

*Industrial Technology:* Creating a Scale Model of a Miniature Golf Course

### **OBJECTIVES:**

Students will gain an understanding of the variety of skills, talents, and resources required to create a small business, for the purpose of this unit, a miniature golf course. Students will be able to give evidence of their learning by constructing a portfolio which will utilize the facets of the subjects integrated into the curriculum.

### **RATIONALE:**

Business skills are not only for people planning a career in business. The skills needed to run a successful business are products of many disciplines taught in school. Integrating these disciplines in a "hands on" approach will give students the knowledge to succeed in any career they wish to pursue. A miniature golf course is a small business that, while benefiting the community, is also interesting enough to capture and maintain students attention. The practical skills that the students will learn will not only pertain to business, but in managing their personal lives as well.

### **RESOURCES NEEDED:**

Human Resources, City Government Officials, Tools, Materials to Construct Model Holes and Advertisements, Art Supplies, Demographic Information

### **UNIT DESCRIPTION:**

This unit is intended to give grade twelve students an opportunity to work together in order to put forth their best effort at creating a workable miniature golf course. The students will be divided into groups that represent students from each discipline. The unit will carry through one semester of the school year. In addition to the work the students complete in their individual unit descriptions (listed below), each group will submit a portfolio at the end of the unit. The portfolio will contain everything the group did to arrive at their final project (including notes from group meetings, research accumulated, rough drafts and sketches, etc.).

*Social Sciences:* The students in these classes will complete a site analysis to determine best location, demographics and economic feasibility. They will also research building permit and operating licenses required.

*Business:* The students in these classes will prepare budget and loan information, determine operating expenses, what it will cost to golf, and how long it will take to make a profit.

*English:* The students in these classes will learn how to write persuasive advertisement texts, and how to write business proposals to build the facility and solicit funds.



*Art:* The students in these classes will demonstrate graphics and layouts for advertisements, sketch a sign for the business, and create sample obstacle designs.

*Mathematics:* These students will sketch holes, and, in cooperation with students in business and science, maximize usage of space for minimal cost and maximize use of materials for minimal cost.

*Science:* These students will research the best building materials, how long they will last, how much they will cost, the practicability of the materials, the upkeep of the materials, and the availability of resources.

*Industrial Technology:* These students will design/draw three blueprints and actually construct a scale model of one hole.

### **ACTIVITY DESCRIPTION:**

In addition to the activities performed in each discipline described in the above Unit Description, there will be additional opportunities to meet as a group and investigate the project. First, all students will have the opportunity to go and visit an actual miniature golf course. They will observe everyday activities and have an opportunity to write an extra credit paper on the experience. Second, a panel of guest speakers will present to the students, in a large group meeting, various aspects of the project they are working on. These speakers may include, but are not limited to, a bank Vice President, a local contractor, a small business owner, and a local government official. The students will have an opportunity to ask questions of these professionals at this meeting. Finally, there will be an open house for parents, students, and the community where each group will have an opportunity to present a display of their work. This may include, but is not limited to, 1) an artists rendering of the course, 2) a scale model of the hole, 3) examples of advertisements, and 4) the demographic material researched for the project.

### **EVALUATION:**

In conjunction with the portfolios that the students in each group submits, each discipline will be evaluated as follows:

*Social Sciences:* Students will report on findings of research and support their conclusions in a 4-5 page paper.

*Business:* Students will submit a 2-4 page paper justifying their proposed building budget, including a copy of the budget.

*English:* Students will submit a one page building proposal to be judged on quality of work.

*Art:* Students will turn in the design for one business sign including the company logo.

*Mathematics:* Students will complete an objective test based on the geometry of the holes. The test will focus on the effects that angles and obstacles have on making a hole in one.

*Science:* Students will report on their research in evaluating the most appropriate building materials for the course and support their conclusions in a 3-4 page paper.

*Industrial Technology:* Students will be judged on the scale model they have constructed.

# *Session II*

*"Puttin' on the Ritz"*

*Shannon Foy, Jim Quirke, Cindy Renaud*

*"Shakespearean T.I.E.S. (Theater, Industrial Technology, English, Social Sciences)  
Across the Curriculum"*

*Laura Allan, Brian Allen, Shelby Bach, Tom Papagiannis, Jodi Vetter*

# PUTTIN' ON THE RITZ

## An Integrated Curriculum Covering the Jazz Era

### Names and Majors

Shannon Foy: English

Jim Quirke: Physical Education (endorsement)

Cindy Renaud: Social Sciences (endorsement)

### Subjects Integrated

English: Composition and literature of Jazz Era.

Physical Education: Social realization of Jazz Era through dance.

Social Sciences: Looking at jazz through African-American historical perspective.

### Objectives

**English:** Students will be able to identify the major themes, authors, and genres of jazz literature. In addition, students will produce a short story or poem written in the jazz style.

**Physical Education:** Based upon the Charleston, students will demonstrate the ability to create a new dance which addresses the present social climate. Students will then assess which dance is most representative of their culture.

**Social Sciences:** Students will assess the contributions of African-Americans to the Jazz Era and their struggle for civil rights during the early to mid twentieth century.

### Rationale

The Jazz Era had many effects on the international society. This unit will provide students with an understanding of what the Jazz Era was, its political and social conditions, and how it has influenced music and society.

### Resources

Newspaper articles, literature written during Jazz Era, films, African-American historical text, dance step patterns, music, Encarta Multimedia Encyclopedia, historical literature on jazz musicians, overheads, stereo, costumes, pictures, slides, portfolios, collage materials, TV and VCR.

### Unit Description

This three week unit will integrate jazz in English, Physical Education and Social Science.

**English:** This unit will focus on literature of the Jazz Era and how it reflects the lifestyles of the time. Students will participate in listening activities, poem and lyric interpretation, and discussion of major themes and critical thinking. Students will also listen to jazz music and write a poem which addresses their emotions concerning present day society. Students will be required to write a short story or poem in the jazz style. Students will write an essay on how jazz literature reflects African-American history. Students will be evaluated on class participation and the historical essay. The short story or poem will be evaluated by peers and the top three winners will present at Jazz Fest '95.

**Physical Education:** The learning of the Jitterbug and Charleston will form a foundation of movements for students to build upon. Students, in groups of four or five, will create their own dance expressing their emotions and view of society. This dance will integrate social awareness taught in the Social Sciences classroom and the emotions of the dance will be elicited by their poem created in English. These dances will be presented on the last two days of the unit. The class will assess the presentations and the top three winners will perform at Jazz Fest '95.

**Social Sciences:** Students will research the life of an African-American jazz musician and the influence he or she had on jazz music. This research will be used to create a biographical collage of their chosen musician. The students will also study obstacles encountered by African-Americans in American society. Through the study of jazz's influence on international music, students will determine the reasons for the acceptance and rejection of jazz in different parts of the world. The collage will be assessed by a panel of judges composed of the teacher and several students. The top three winners will present at Jazz Fest '95.

### References

- The African-American Experience: A History.* Englewood, NJ: Globe, 1992.
- Albert, Richard, N. *From Blues to Bop.* Baton Rouge: LA State U Press, 1990.
- Breton, Marcela. *Hot and Cool Jazz Short Stories.* New York: Penguin Group, 1990.
- Feinstein, Sascha, and Yusef Komunyakaa. *The Jazz Poetry Anthology.* Bloomington: IU Press, 1991.
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# *Shakespearean T.I.E.S.*

## *(Theater, Industrial Technology, English, Social Sciences)*

### *Across the Curriculum*

#### **Names & Major**

Laura Allan- Theater & English Education  
Brian Allen- Industrial Technology Education  
Shelby Bach- English Education

Tom Papagiannis- English Education  
Jodi Vetter- Social Science Education

#### **Subjects Integrated**

English: Teach the literary elements of Romeo and Juliet.

Social Science: Teach the history of the English Renaissance and the social stratification of the Elizabethan Era.

Theater: Teach theater production in the English Renaissance.

Industrial Technology: Teach the architecture of the theaters built in this time period.

#### **Objectives**

1. Students will be able to identify the literary elements as they apply to Romeo & Juliet.
2. Students will be able to identify the levels of society in the Elizabethan Era.
3. Students will be able to recognize the significant events pertaining to the Renaissance.
4. Students will be able to sketch and label the parts of the Globe Theater.
5. Students will be able to explain the role of Theater in Renaissance England and the conventions of Elizabethan drama.

#### **Rationale**

Curriculum integration in teaching Romeo and Juliet will provide students with an enhanced understanding of the period in which it was written. Students will gain an appreciation of theater, literature, architecture, history, and society in the Elizabethan Era. This knowledge-base can lead to further interest in contemporary arts and sciences and will provide a larger framework in which to place the text. This integration will give students the benefit of a holistic education and will expand the teaching and learning horizons of everyone involved.

#### **Resources Needed**

Romeo and Juliet script, spiral notebook, tape recorder, selected music from productions of Romeo and Juliet, graph paper, Living Theater text, slides of costumes and set designs, slide projector, Handout: time line of established theaters, acting companies, and major plays written.

#### **Unit Description**

English-Students will read and analyze Shakespeare's Romeo and Juliet. The students will derive the meaning of the text by identifying some of the key literary elements and observing how these elements create the mood of the text. Prior to studying the text, one activity will involve asking students to write images and feelings that come to mind when listening to contemporary music from various productions of Romeo and Juliet. To better enhance the students' understanding of Romeo and Juliet, other activities will include role playing, journal writing, and discussions of the social implications of the text, leading to:

**Social Science**-In this unit students will study the history of the European Renaissance. Specific topics covered within the unit include: historical factors that influenced the Renaissance, impact of the Renaissance upon the political, social, and economic climates in Europe, the regional differences of the Renaissance and the corresponding religious reformation. Within this unit, there are several activities intended to enrich student understanding including: analysis of primary source documents of the time period to construct their own personal narratives and conduct a debate presenting the opposing viewpoints of the Reformation. Through these lessons students will have the understanding of the social and political climate of Renaissance Europe, leading to:

**Theater**-Students will study Renaissance Theater. Such studies will include: how the socio-political climate affected theater, plays and playwrights of the said period, how the social strata and design of the playhouses determined audience seating in public and private theaters, professional acting companies of the said period, and conventions of Renaissance scenery and costuming. Activities will include: designing a costume/set for a character/scene in Romeo and Juliet and debate over public versus private theaters, leading to:

**Industrial Technology**-Students will study the architecture of the Globe Theater. They will know all the materials that were used to create this amazing structure. The focus of this unit will be how the engineers of this time developed a theater that would not only be pleasing to the eye, but also the staging of the play. The Theater was created so that the audience could see and hear the actors clearly. Activities for this unit will include sketching the Theater the way it was and sketching a modernized Globe Theater.

## **Evaluation**

Students will separate into groups of four or five and decide a method of presentation that incorporates all four content areas. After a discussion of various presentation formats, students will choose one and prepare a ten to twelve minute skit, debate, symposium, etc., to perform for their classmates. Grades will be based on participation, creativity, and the extent to which all four content areas are represented.

## **References**

- Finkelstein, M., Palmer, J., & Stephen, R. (1979). People and Progress: A Global History. River Forest: Landlaw Brothers.
- Goldfarb, A., & Wilson, E. (1994). Living Theater: A History. New York: McGraw
- McDonnell, H. (1979). England and Literature. Chicago: Scott, Foresman and Co.
- Nguyen, T. (1989). Romeo. Illinois English Bulletin, 40.



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